INDEX TO *Proceedings*

AMERICAN CONCRETE INSTITUTE

VOLUME 44—1948

From JOURNAL OF THE AMERICAN CONCRETE INSTITUTE, Vol. 19 Sept. 1947, to June 1948 and Part 2, December 1948

Original contributions to the JOURNAL OF THE AMERICAN CONCRETE INSTITUTE—papers, reports and discussions—are indexed in three categories;

1. Title ..... **Contraction Joint Grouting of Large Dams** (**43**-21) A. Warren Simonds Feb. 1947 673

2. Author ..... **Abeles, Paul William**—Disc. Analysis and Design of Elementary Prestressed Concrete Members (**43**-4) June 1947 88-1

3. Subject ..... **Dust prevention methods**—Floor tests (**43**-9) Oct. 1946 181

Numbers in parentheses with each entry constitute the title number of the article. The bold face portion indicates the number of the *Proceedings* volume (in this case 43) in which the topic appears. The month and year indicate the JOURNAL issue. Page numbers of both *Proceedings* and JOURNAL are the same.

Job Problems and Practice items include "JPP" in the parentheses:

Construction — Frame vs. wall bearing (**JPP 43**-181) Jan. 1947 606

again the bold face number is the *Proceedings* volume number.

The index to Current Reviews published in this volume begins on p. 1091.

A

Absorption — Affected by waterproofing agents (**JPP-44**-185) Sept. 1947..... 77

Accelerators — Recommended practice for winter concreting (**44**-13) Dec. 1947..... 309

ACI
-Committee organization (**44**-27) April 1948 605
-Journal—Policies (**44**-27) April 1948..... 605
-Journal—Status and standards (**44**-27) April 1948..... 605
-Nineteenth annual convention (**44**-14) Jan. 1948..... 345
-Staff organization (**44**-27) April 1948..... 605
-Standards — General observations (**44**-27) April 1948..... 605

Acid treatment—Cinder aggregate (**44**-16) Jan. 1948..... 361

Acid water — Effect on concrete (**44**-40) June 1948..... 977

Acid waters — Effect in mixing concrete (**JPP 44**-197) Jan. 1948..... 414

Admixtures
-Change of policy in 25 years (**44**-32) April 1948..... 693
-Coarse aggregate lessens deterioration of sand-gravel concrete (**44**-41) June 1948.... 1009

Age—Effect on plastic flow—Thin slabs (**44**-10) Nov. 1947..... 237

Aggregate Reaction with Cement Alkalies (**44**-29) Willard H. Parsons, Herbert Insley April 1948..... 625
-Disc.—Duncan McConnell, Richard C. Mielenz, William Y. Holland, Kenneth T. Greene and authors Part 2, Dec. 1948....632-1

Aggregate
-Barker Dam—Original construction (**44**-30) April 1948..... 633
-Cement reaction (**44**-3) Oct. 1947..... 93
-Cement reaction — Chemical processes (**44**-8) Nov. 1947..... 193
-Cement reaction with (**44**-41) June 1948... 1009
-Chinese sources (**44**-17) Jan. 1948..... 381
-Cinder (**44**-16) Jan. 1948..... 361
-Coarse—Preventive for sand-gravel concrete deterioration (**44**-41) June 1948..... 1009
-Deleterious (**44**-3) Oct. 1947..... 93
-Deleterious, in concrete (**44**-36) May 1948. 821
-Deleteriousness criteria (**44**-8) Nov. 1947.. 193
-Effect on durability (**44**-32) April 1948.... 732
-Evaluation in pavement—General (**44**-42) June 1948..... 1033
-Expansion — Chemical reactivity tests (**44**-8) Nov. 1947..... 193
-Grading—Barker Dam (**44**-30) April 1948. 633
-Grading—China (**44**-17) Jan. 1948..... 381
-Grading—German highway construction (**44**-39) June 1948..... 933
-Handling — Chinese methods (**44**-17) Jan. 1948..... 381
-Lightweight—Pumice (**JPP 44**-207) June 1948..... 1062
-Opal—Reactivity tests (**44**-29) April 1948. 625
-Pessimum proportion (**44**-8) Nov. 1947.... 193
-Petrographic examination of (**44**-3) Oct. 1947..... 93
-Potassium hydroxide solution test (**44**-8) Nov. 1947..... 193
-Prepakt at Barker Dam (**44**-30) April 1948 633
-Processing plant at Barker Dam (**44**-30) April 1948..... 633
-Pumice—Properties and uses (**JPP 44**-207) June 1948..... 1062
-Pumice used in housing project (**44**-34) May 1948..... 797
-Reaction with alkali (**44**-29) April 1948... 625
-Reaction with alkaline solutions (**44**-8) Nov. 1947..... 193
-Reactivity—Chemical test for (**44**-8) Nov. 1947..... 193
-Reactivity — Petrographic determination (**44**-8) Nov. 1947..... 193
-Reactivity — Test procedure — Chemical (**44**-8) Nov. 1947..... 193
-Sand-gravel — Performance record (**44**-41) June 1948..... 1009
-Selection (**44**-3) Oct. 1947..... 93
-Sodium hydroxide solution test (**44**-8) Nov. 1947..... 193
-Studies—Methods of conducting (**44**-42) June 1948..... 1033
-Surface coatings — Effect of washing aggregates (**JPP 44**-206) June 1948..... 1061
-Test procedures—Inadequacy (**44**-42) June 1948..... 1033
-Washing procedures (**JPP 44**-206) June 1948..... 1061

Air content — Comparison of mortar and concrete (**44**-28) April 1948..... 613

Air-entraining agents
-Addition during cement manufacture (**44**-26) March 1948..... 553
-Triethanolamine (**JPP-44**-205) June 1948. 1061

Air-entraining cement — Effect on durability (**44**-32) April 1948..... 732

Air-entraining concrete — Vibration effect (**JPP 44**-193) Oct. 1947..... 182

Air entrainment
-Affected by black coloring agents (**44**-28) April 1948..... 613
-Effect on durability (**44**-36) May 1948.... 821

Air loss—Vibration and handling concrete (**JPP 44**-202) Feb. 1948..... 504

Albite
-Reactivity (**44**-3) Oct. 1947..... 93
-Reactivity tests (**44**-8) Nov. 1947..... 193

Alfesil—Use in foundation grouting (**44**-30) April 1948..... 633

Alkali
-Aggregate reaction — Hansen's hypothesis (**44**-29) April 1948..... 625
-Aggregate reaction—History of knowledge of (**44**-32) April 1948..... 700
-Aggregate reaction—Tests and observations (**44**-29) April 1948..... 625
-Aggregate reaction—Theory of (**44**-29) April 1948..... 625
-Aggregate reactivity — Cements in long-time study (**44**-33) April 1948..... 745
-Cement content — Effect on expansion (**44**-41) June 1948..... 1009
-Content of cement (**44**-3) Oct. 1947..... 93
-Effect on cement (**44**-32) April 1948..... 700
-Soil — Effect on concrete durability (**44**-36) May 1948..... 821

Allen, Harold—Concrete Pavements on the German Autobahnen (**44**-39) June 1948... 933

Almandite—Reactivity (**44**-3) Oct. 1947... 93

Alum — Formation during deterioration (**44**-36) May 1948..... 821

American Iron and Steel Institute—Reinforcing bar studies (**44**-20) Feb. 1948..... 437

American Society for Testing Materials
-Cement specifications (**44**-32) April 1948.. 705
-Reinforcing bar studies (**44**-20) Feb. 1948. 437

Analcite—Reactivity (**44**-3) Oct. 1947..... 93

Analysis of Normal Stresses in Reinforced Concrete Sections Under Symmetrical Bending (**44**-22) Michel Bakhoum Feb. 1948..... 457

Analysis of Two-Column Symmetrical Bents and Vierendeel Trusses Having Parallel and Equal Chords (**44**-9) John E. Goldberg Nov. 1947..... 225

Analysis
-Bents — Two-column symmetrical (**44**-9) Nov. 1947..... 225
-Normal stresses — Symmetrical bending (**44**-22) Feb. 1948..... 457
-Normal stresses—Unsymmetrical bending (**44**-31) April 1948..... 669
-Trusses—Vierendeel (**44**-9) Nov. 1947..... 225

Anchor Bolts Set in Drilled Holes (JPP 44-183) E. L. Richard Sept. 1947... 81
Anchor bolts—Set in drilled holes (JPP 44-183) Sept. 1947..... 81
Anchorage
–Bent-bar — Slip under load (44-12) Dec. 1947..... 289
–Bent-bar — Strength under load (44-12) Dec. 1947..... 289
–Methods of securing (44-25) March 1948.. 521
–Reinforcement—Code requirements (44-1) Sept. 1947..... 1
Andesine
–Reactivity (44-3) Oct. 1947..... 93
–Reactivity tests (44-8) Nov. 1947..... 193
Andesite—Reactivity tests (44-8) Nov. 1947 193
Anorthosite—Reactivity tests (44-8) Nov. 1947..... 193
Anti-freeze compounds — Recommended practice for winter concreting (44-13) Dec. 1947..... 309
Apatite—Reactivity (44-3) Oct. 1947..... 93
Aphthitalite—Occurrence and effect in cement clinker (44-38) May 1948..... 877
Aqueduct design — Precast pipe (44-11) Dec. 1947..... 261
Arch bridge — Masonry — Grouting (JPP 44-200) Feb. 1948..... 502
Arkose—Reactivity tests (44-8) Nov. 1947.. 193
Asphalt surface — Pavement (44-39) June 1948 933
Augite—Reactivity (44-3) Oct. 1947..... 93
Autobahnen
–Design (44-39) June 1948..... 933
–Germany—Construction practices (44-39) June 1948..... 933
–Germany—Present condition (44-39) June 1948..... 933
–Map of the system (44-39) June 1948..... 933
Autoclave test—Cement and clinker (44-33) April 1948..... 745

B

Bakhoum, Michel
–Analysis of Normal Stresses in Reinforced Concrete Sections Under Symmetrical Bending (44-22) Feb. 1948..... 457
–Normal Stresses in Reinforced Concrete Sections Under Unsymmetrical Bending (44-31) April 1948..... 669
Bankette — Paved — German highways (44-39) June 1948..... 933
Barker Dam
–Construction history (44-30) April 1948... 633
–Restoration program (44-30) April 1948... 633
Bars
–Cut-off in beams (44-25) March 1948..... 521
–Deformed — Development of (44-20) Feb. 1948..... 437
–Deformed—Pull-out test results (44-25) March 1948..... 521
Basalt
–Chinese use as aggregate (44-17) Jan. 1948 381
–Reactivity (JPP 44-204) June 1948..... 1058
–Reactivity tests (44-8) Nov. 1947..... 193
Basement dampness — Prevention (44-19) Feb. 1948..... 421
Basement drainage — Surface and subsurface (44-19) Feb. 1948..... 421
Batching plant — Pumice concrete (44-34) May 1948..... 797
Bates, P. H.—Progress with Concrete, 1923-1948 (44-32) April 1948..... 693
Baumann, Paul—Disc. Restoration of Barker Dam (44-30) Part 2, Dec. 1948....668–1
Belgin, Adil—Protection of Electric Strain Gages in Concrete (44-7) Nov. 1947..... 189
Beams
–Bond function in (44-25) March 1948..... 521
–Continuous—Bond in (44-25) March 1948. 521
–Design—Code requirements (44-1) Sept. 1947..... 1
–Failures—Varied with loading conditions (44-43) June 1948..... 1041
–Flexural computations—Code requirements (44-1) Sept. 1947..... 1
–Stiffened by wall (JPP 44-187) Sept. 1947. 80
–Tests—Stress distribution determination in reinforcing steel (44-43) June 1948..... 1041
–Wedge shaped—Bond in (44-25) March 1948..... 521
Bending — Unsymmetrical — Analysis of stresses (44-31) April 1948..... 669
Bent analysis—Examples (44-9) Nov. 1947. 225
Bent bars
–Code requirements (44-1) Sept. 1947..... 1
–First usage (44-20) Feb. 1948..... 437
–Slip under load (44-12) Dec. 1947..... 289
–Strength tests under load (44-12) Dec. 1947 289
Benton, Elton J.—Chemical Test for Reactivity of Concrete Aggregates with Cement Alkalies; Chemical Processes in Cement-Aggregate Reaction (44-8) Nov. 1947..... 193
Bent-up bars—Beam design (44-25) March 1948..... 521
Bibliography
–Cement-aggregate reaction (44-3) Oct. 1947 93
–Winter concreting—135 selected references (44-13) Dec. 1947..... 309
Bins—Flour storage (JPP 44-186) Sept. 1947 79
Biotite—Reactivity (44-3) Oct. 1947..... 93
Bituminous coatings — Basement walls (44-19) Feb. 1948..... 421
Bjuggren, Ulf—Disc. Bond and Anchorage (44-25) Part 2, Dec. 1948.....552–1
Blanks, Robert F.
–Sawing and Cutting Concrete Specimens (JPP 44-198) Jan. 1948..... 416
–Clay Coating on Aggregates (JPP 44-206) June 1948..... 1061
Bleeding—Controlled by consistency variation (44-32) April 1948..... 705
Blocks—Cinder aggregate (44-16) Jan. 1948. 361
Blowups — Pavement — Causes (44-42) June 1948..... 1033
Bolts—Anchor—Shear resistance (JPP 44-183) Sept. 1947..... 81
Bond and Anchorage (44-25)
–T. D. Mylrea March 1948..... 521
–Disc. Ulf Bjuggren, S. D. Lash, Phil M. Ferguson and author Part 2, Dec. 1948...552–1
Bond—Advances in knowledge—25 years (44-32) April 1948..... 720
–Available information summarized (44-25) March 1948..... 521
–Development of study (44-20) Feb. 1948.. 437
–Embedment length required (44-25) March 1948..... 521
–Formula (44-25) March 1948..... 521
–Function in beams (44-25) March 1948... 521
–Reinforcement for—Code requirements (44-1) Sept. 1947..... 1
–Safety factor in (44-25) March 1948..... 521
–Stress—Allowable (44-25) March 1948.... 521
–Stress — Distribution in beams (44-25) March 1948..... 521
–Stress — Distribution in pull-out specimens (44-25) March 1948..... 521
–Stress—Treatment of high (44-25) March 1948..... 521
–Tests—History (44-20) Feb. 1948..... 437
Bonding—New concrete to old (44-24) March 1948..... 513

Bowman, Waldo G.,—Progress with Concrete, 1923-1948 (**44**-32) April 1948..... 693
Bray, Thomas J.—Deterioration of Sacked Cement (**JPP 44**-192) Jan. 1948..... 413
Bridge repair—Grouting of masonry arch (**JPP 44**-200) Feb. 1948..... 502
Bridges
–Arch—Studies in the past 25 years (**44**-32) April 1948..... 720
–Highway—Increased information available (**44**-32) April 1948..... 720
–Rigid frame—Development in 25 years (**44**-32) April 1948..... 720
Brine
–Effect on concrete storage tanks (**44**-5) Oct. 1947..... 141
–Storage tanks—Deterioration (**44**-5) Oct. 1947..... 141
Brown, L. S.—Long-Time Study of Cement Performance in Concrete, Chapter 4 — Microscopical Study of Clinkers (**44**-38) May 1948..... 877
Brownfield, Allen H.—How Much Wall is Effective in Stiffening a Concrete Beam? (**JPP 44**-187) Sept. 1947..... 80
Building Code Requirements for Reinforced Concrete (ACI 318-47) (**44**-1) Report of Committee 318 Sept. 1947..... 1
Building Code—Requirements (ACI 318-47) (**44**-1) Sept. 1947..... 1
Burks, S. D.—Five-Year Temperature Record of a Thin Concrete Dam, The (**44**-2) Sept. 1947..... 65
Bytownite
–Reactivity (**44**-3) Oct. 1947..... 93
–Reactivity tests (**44**-8) Nov. 1947..... 193

C

"Cage" reinforcement — Precast pipe (**44**-11) Dec. 1947..... 261
Calcite—Reactivity (**44**-3) Oct. 1947..... 93
Calcium aluminates — Occurrence and effect in cement clinker (**44**-38) May 1948. 877
Calcium bicarbonate — Formation during deterioration of concrete (**44**-40) June 1948 977
Calcium carbonate — Formation during alkali-aggregate reaction (**44**-29) April 1948 625
Calcium chloride
–Accelerator for winter concreting (**44**-13) Dec. 1947..... 309
–Dehumidifying basements—(**44**-19) Feb. 1948..... 421
–Storage tanks affected by (**44**-5) Oct. 1947 141
Calcium hydroxide — Formation during alkali-aggregate reaction (**44**-29) April 1948 625
Calcium oxide — Occurrence in cement clinker (**44**-38) May 1948..... 877
Calcium stearate — Integral waterproofing (**JPP 44**-185) Sept. 1947..... 77
Calcium sulfate — Cause of pop-outs in cinder concrete (**44**-16) Jan. 1948..... 361
Canvas — Protection — Winter concreting (**44**-13) Dec. 1947..... 309
Capillarity — Reduction in basement concrete (**44**-19) Feb. 1948..... 421
Capillary rise of ground water — Prevention of (**44**-39) June 1948 933
Capitals — Column — Code requirements (**44**-1) Sept. 1947..... 1
Carbon Disulfide Effect on Concrete (**JPP 44**-201) Feb. 1948..... 503
Carbon disulfide — Deterioration effect (**JPP 44**-201) Feb. 1948..... 503
Carbonic acid—Effect in sea water action on concrete (**44**-40) June 1948..... 977
Carlson strain meters — Barker Dam use (**44**-30) April 1948..... 633
Celotex — Protection — Winter concreting (**44**-13) Dec. 1947..... 309
Cement-Aggregate Reaction in Concrete (**44**-3) Duncan McConnell, Richard C. Mielenz, William Y. Holland, Kenneth T. Greene Oct. 1947..... 93
Cement
–Aggregate reaction—Chemical processes (**44**-8) Nov. 1947..... 193
–Aggregate reaction—Effect of coarse aggregate on (**44**-41) June 1948..... 1009
–Air-entraining — Advantages of (**44**-32) April 1948..... 705
–Air-entraining — Affected by black coloring agents (**44**-28) April 1948..... 613
–Alkali effect in (**44**-32) April 1948..... 700
–Alkalinity test (**44**-33) April 1948..... 745
–Autoclave expansion tests (**44**-33) April 1948..... 745
–Bags—Bituminized for protection (**JPP 44**-192) Jan. 1948..... 413
–Barker Dam construction—Old specifications (**44**-30) April 1948..... 633
–Chemical analysis — Long-time study (**44**-33) April 1948..... 745
–Clinker—Autoclave test (**44**-33) April 1948 745
–Clinker—Chemical analysis (**44**-33) April 1948..... 745
–Clinker — Microscopical studies (**44**-38) May 1948..... 877
–Composition effect on durability (**44**-40) June 1948..... 977
–Composition effect on durability of concrete (**44**-36) May 1948..... 821
–Composition — Long-time study analysis (**44**-26) March 1948..... 553
–Compound composition calculated (**44**-33) April 1948..... 745
–Consistency tests (**44**-33) April 1948..... 745
–Deterioration during storage (**JPP 44**-192) Oct. 1947..... 181
–Dyckerhoff (**44**-36) May 1948..... 821
–Fineness — Effect on shrinkage (**44**-6) Oct. 1947..... 149
–Fineness — German standards (**44**-39) June 1948..... 933
–Fineness studies (**44**-33) April 1948..... 745
–Floc test (**44**-33) April 1948..... 745
–Free alkali test (**44**-33) April 1948..... 745
–Grinding operations (**44**-26) March 1948.. 553
–Heat — Expansion observations (**44**-33) April 1948..... 745
–Heat of hydration determination (**44**-33) April 1948..... 745
–Heat of hydration varying with composition (**44**-38) May 1948..... 877
–High early strength (**44**-32) April 1948..... 705
–High potash — Alkali-aggregate reaction tests (**44**-29) April 1948..... 625
–History of development in U. S. (**44**-32) April 1948..... 700
–Low heat (**44**-32) April 1948..... 705
–Manufacture — Chinese methods (**44**-17) Jan. 1948 381
–Manufacture — German practices (**44**-39) June 1948..... 933
–Manufacture — Observations for long-time study program (**44**-26) March 1948..... 553
–Mortar — Compressive sternght (**44**-33) April 1948..... 745
–Mortar — Tensile strength (**44**-33) April 1948..... 745
–Non-evaporable water tests (**44**-33) April 1948 745
–Particle size distribution (**44**-33) April 1948 745
–Performance—Long-time study (**44**-21) Feb. 1948..... 441
–Performance — Long-time study March 1948..... 553
–Performance — Long-time study (**44**-33) April 1948..... 745
–Raw materials (**44**-26) March 1948..... 553
–Slag—Eisenportland (**44**-39) June 1948... 933

–Slag—Hochofen (44-39) June 1948..... 933
–Specific gravity test results (44-33) April 1948..... 745
–Specific surface (44-33) April 1948..... 745
–Specification changes — 25 years (44-32) April 1948..... 705
–Specifications — Precast pipe (44-11) Dec. 1947..... 261
–Storage—Long-time study purposes (44-26) March 1948..... 553
–Storage — Sacks — Canadian tests (**JPP** 44-192) Feb. 1948..... 501
–Studies for reaction with aggregates (44-41) June 1948..... 1009
–Sugar-solubility test (44-33) April 1948... 745
–Sulfate content—Effect on shrinkage and warping (44-6) Oct. 1947..... 149
–Sulfate resistance (44-32) April 1948..... 705
–Sulfate resistance (44-36) May 1948..... 821
–Sulfate resistance — Long-time study (44-33) April 1948..... 745
–Temperature — Data at completion of manufacture (44-26) March 1948..... 553
–Temperature — Effect on mix properties (**JPP** 44-189) Dec. 1947..... 330
–Testing—German practice (44-39) June 1948..... 933
–Tests—Long-time study (44-33) April 1948 745
–Tests—Long-time study projects (44-21) Feb. 1948..... 441
–Time-of-set tests (44-33) April 1948..... 745
–Tricalcium aluminate content—Effect on shrinkage (44-6) Oct. 1947..... 149
–Types — Comparison of properties (44-32) April 1948..... 705
–Vapor sorption tests (44-33) April 1948... 745

"Cementico" — Performance on pumice concrete surface (44-34) May 1948..... 797

Centers of action method—Stress analysis —Unsymmetrical bending (44-31) April 1948..... 669

Cervin, D. R.,—Design of Rectangular Tied Columns Subject to Bending with Steel in all Faces (44-18) Jan. 1948..... 401

Chalcedony
–Aggregate reactivity (44-3) Oct. 1947..... 93
–Reactivity tests (44-8) Nov. 1947..... 193

Chemical Reactivity of Dolerite (Diabase) (**JPP** 44-204) Bryant Mather June 1948.. 1058

Chemical Test for Reactivity of Concrete Aggregates with Cement Alkalies; Chemical Processes in Cement-Aggregate Reaction (44-8) Richard C. Mielenz, Kenneth T. Greene, Elton J. Benton Nov. 1947..... 193
–Disc. J. C. Sprague, J. Chunn and authors Part 2, Dec. 1948.....224–1

Chemical attack—Cause of failure (44-42) June 1948..... 1033

Chemical tests — Aggregate reactivity (44-8) Nov. 1947..... 193

Chert
–Aggregate reactivity (44-3) Oct. 1947..... 93
–Reactivity studies (44-42) June 1948..... 1033
–Various kinds — Reactivity tests (44-8) Nov. 1947..... 193

Chia-Shiang Yen—Disc. Concrete Making in China (44-17) Part 2, Dec. 1948.....400–1

China
–Aggregate sources (44-17) Jan. 1948..... 381
–Cement manufacture (44-17) Jan. 1948... 381
–Concreting methods (44-17) Jan. 1948.... 381
–Hydroelectric development (44-17) Jan. 1948..... 381
–Labor costs (44-17) Jan. 1948..... 381
–Reinforcing steel production (44-17) Jan. 1948..... 381

Chunn, J.—Disc. Chemical Test for Reactivity of Concrete Aggregates with Cement Alkalies; Chemical Processes in Cement-Aggregate Reaction (44-8) Part 2, Dec. 1948.....224–1

Cinder aggregate
–Acid treatment (44-16) Jan. 1948..... 361
–Lime treatment (44-16) Jan. 1948..... 361
–Magnetic separation (44-16) Jan. 1948.... 361
–Microscopical analysis of impurities (44-16) Jan. 1948..... 361
–Moist storage (44-16) Jan. 1948..... 361
–Pop-outs caused by (44-16) Jan. 1948..... 361
–Specifications (44-16) Jan. 1948..... 361
–Staining caused by (44-16) Jan. 1948..... 361
–Steam test for detecting impurities (44-16) Jan. 1948..... 361
–Steam treatment (44-16) Jan. 1948..... 361

Cinder blocks (44-16) Jan. 1948..... 361

Cinder concrete—Pop-outs (44-16) Jan. 1948..... 361
–Staining of (44-16) Jan. 1948..... 361

Cinders — Subgrade highway material (44-39) June 1948..... 933

Clark, Arthur P.—Highlights of the Development of Reinforced Concrete and the Study of Bond (44-20) Feb. 1948..... 437

Clark, C. A.—Development of Tilt-Up Construction (44-35) May 1948..... 813

Clay Coating on Aggregates (**JPP** 44-206) Robert F. Blanks June 1948..... 1061

Clay — Aggregates coated with (**JPP** 44-206) June 1948..... 1061

Cleaver, L. T.,—Detector for Locating Reinforcing Bars in Concrete (**JPP** 44-190) Oct. 1947..... 178

Clinker
–Autoclave test (44-33) April 1948..... 745
–Burning — Cement manufacture (44-26) March 1948..... 553
–Chemical analysis (44-33) April 1948..... 745
–Cooling — Cement manufacture (44-26) March 1948..... 553
–Cooling rate effect (44-38) May 1948..... 877
–Density vs. surface area (44-38) May 1948 877
–Etched by various solutions during mineral analysis (44-38) May 1948..... 877
–Grinding — Cement manufacture (44-26) March 1948..... 553
–Hardness effect on microscopical analysis (44-38) May 1948..... 877
–Liter weight—Related to composition (44-38) May 1948..... 877
–Liter weight tests (44-26) March 1948.... 553
–Manufacture — Glass formation during (44-38) May 1948..... 877
–Measured vs. potential compound composition (44-38) May 1948..... 877
–Mineral composition (44-38) May 1948... 877
–Photomicrographs (44-38) May 1948..... 877
–Polishing for mineral analysis (44-38) May 1948..... 877
–Rings—Removal by gun (**JPP** 44-188) Oct. 1947..... 177
–Sieve analysis (44-26) March 1948..... 553
–Size—Related to composition (44-38) May 1948..... 877
–Wet and dry process differences (44-38) May 1948..... 877

Code requirements — Reinforced concrete (44-1) Sept. 1947..... 1

Codes—Difficulties in formulating (44-32) April 1948..... 700

Coignet—Reinforced concrete development history (44-20) Feb. 1948..... 437

Coil counter—Pipe reinforcement (44-11) Dec. 1947..... 261

Cold weather concreting — Recommended practice (44-13) Dec. 1947..... 309

Collophane—Reactivity (44-3) Oct. 1947... 128

Color—Black iron oxide admixture (44-28) April 1948..... 613
–Carbon black emulsion admixture (44-28) April 1948..... 613

Coloring agents — Procedure of evaluation for air-entraining concrete (**44**-28) April 1948 613

Columns
–Allowable loading—Code requirements (**44**-1) Sept. 1947 1
–Combination—Code requirements (**44**-1) Sept. 1947 1
–Composite — Code requirements (**44**-1) Sept. 1947 1
–Design changes in 25 years (**44**-32) April 1948 720
–Design — Code requirements (**44**-1) Sept. 1947 1
–Design — Coefficients tabulated (**44**-18) Jan. 1948 401
–Design — Examples — Combined loading with steel in all faces (**44**-18) Jan. 1948 401
–Design—Rectangular tied (**44**-18) Jan. 1948 401
–Eccentrically loaded—Design with steel in all faces (**44**-18) Jan. 1948 401
–Moment computation—Code requirements (**44**-1) Sept. 1947 1
–Rectangular tied—Design (**44**-18) Jan. 1948 401
–Spirally reinforced — Code requirements (**44**-1) Sept. 1947 1
–Stress calculation — Code requirements (**44**-1) Sept. 1947 1
–Tied — Code requirements (**44**-1) Sept. 1947 1

Combined loading—Columns designed for (**44**-18) Jan. 1948 401

Committee
–318 report—Building Code Requirements for Reinforced Concrete (ACI 318-47) (**44**-1) Sept. 1947 1
–604 report — Proposed Recommended Practice for Winter Concreting Methods (**44**-13) Dec. 1947 309

Compression steel — Flexural members — Code requirement (**44**-1) Sept. 1947 1

Compressive strength — Mortar tests (**44**-33) April 1948 745

Concrete Deterioration in a Shipway (**44**-40) Ruth D. Terzaghi June 1948 977

Concrete Making in China (**44**-17)
–John S. Cotton Jan. 1948 381
–Disc. Chia-Shiang Yen, Wu Chung-Wei and author Part 2, Dec. 1948 400–1

Concrete Pavements on the German Autobahnen (**44**-39)
–F. H. Jackson, Harold Allen June 1948 933
–Disc. A. E. Wynn, M. A. Swayze, Nathan C. Rockwood and authors Part 2, Dec. 1948 976–1

"Concrete Primer"—Value of (**44**-32) April 1948 705

Condensation
–Basements—Test for (**44**-19) Feb. 1948 ... 421
–Interior masonry surfaces (**44**-37) May 1948 849
–Prevention in basements (**44**-19) Feb. 1948 421
–Theory (**44**-19) Feb. 1948 421

Conduction calorimeter — Heat of hydration of cement determination (**44**-33) April 1948 745

Conductivity
–Coefficient — Various building materials (**44**-37) May 1948 849
–Listed for various building materials (**44**-34) May 1948 797

Consistency control — Importance of (**44**-32) April 1948 705

Consistency meter—Grout (**44**-30) April 1948 633

Construction joints — Code requirements (**44**-1) Sept. 1947 1

Continuous frames — Flat slabs designed as—Code requirements (**44**-1) Sept. 1947 .. 1

Copper Alloy Nails to Penetrate Nailing Concrete (JPP 44-195) Dec. 1947 332

Corner failures — Highways in Germany (**44**-39) June 1948 933

Cost
–Comparison of four types of floor framing (**44**-15) Jan. 1948 349
–Comparison — Tilt-up construction (**44**-35) May 1948 813
–Concrete vs. masonry in China (**44**-17) Jan. 1948 381
–Economy in structural design (**44**-15) Jan. 1948 349
–Effect on development of reinforced concrete (**44**-20) Feb. 1948 437
–Housing project — Prefabricated pumice (**44**-34) May 1948 797

Cotton, John S.—Concrete Making in China (**44**-17) Jan. 1948 381

Coverings — Protective — Recommended practice for winter concreting (**44**-13) Dec. 1947 309

Crack Control in Portland Cement Plaster Panels (**44**-4)
–Bert A. Hall Oct. 1947 129
–Disc. Erwin M. Lurie Part 2, Dec. 1948 .. 140–1

Cracking
–Alkali-aggregate reaction result (**44**-36) May 1948 821
–Caused by alkali-aggregate reaction (**44**-29) April 1948 625
–Cement aggregate reaction (**44**-3) Oct. 1947 99
–Elimination — Portland cement plaster (**44**-4) Oct. 1947 129
–Piers exposed to sea water (**44**-40) June 1948 977
–Progressive development in piers exposed to sea water (**44**-40) June 1948 977
–Repair material on hydraulic structures (**44**-24) March 1948 513
–Sand-gravel concrete (**44**-41) June 1948 .. 1009
–Transverse — Highways in Germany (**44**-39) June 1948 933

Creep of Steel and Concrete in Relation to Prestressed Concrete (**44**-23) Gustave Magnel Feb. 1948 485

Creep
–Concrete—Prestressed (**44**-23) Feb. 1948 .. 485
–Effect of (**44**-32) April 1948 720
–Steel in prestressed concrete (**44**-23) Feb. 1948 485

Creep tests — Concrete — Prestressed (**44**-23) Feb. 1948 485
–Constant length—Steel wire (**44**-23) Feb. 1948 485
–Constant load—Steel wire (**44**-23) Feb. 1948 485
–Techniques—Steel wire (**44**-23) Feb. 1948. 485

Crum, Roy W.—Progress with Concrete, 1923-1948 (**44**-32) April 1948 693

Curing
–Foundations—Cold weather (**44**-30) April 1948 633
–Pavement concrete — Germany (**44**-39) June 1948 933
–Plaster (**44**-4) Oct. 1947 129
–Steam and water—Precast pipe (**44**-11) Dec. 1947 261
–Temperature — Effect on strength (**44**-13) Dec. 1947 309
–Temperature — Recommended practice for winter concreting (**44**-13) Dec. 1947 309

Cutting concrete (JPP 44-198)
–Jan. 1948 416
–June 1948 1057

Cylinder reinforcement — Precast pipe (**44**-11) Dec. 1947 261

D

Dampness — Prevention in basements (**44**-19) Feb. 1948 421

Dams
–Construction—Old methods (**44**-30) April 1948 633
–Englebright, H. C. (**44**-2) Sept. 1947 65
–Repair methods — Emergency — China (**44**-17) Jan. 1948 381
–Repair operations at Barker Dam (**44**-30) April 1948 633
–Repair — Problems encountered (**44**-30) April 1948 633
–Surface treatment prior to repair (**44**-30) April 1948 633
–Temperature — Five-year record (**44**-2) Sept. 1947 65

Daraseal—Foundation curing at Barker Dam (**44**-30) April 1948 633

Darex—Use in precast slabs (**44**-30) April 1948 633

Davis, Raymond E.—Restoration of Barker Dam (**44**-30) April 1948 633

Definitions—Reinforced concrete terminology—Code (**44**-1) Sept. 1947 1

Deflection—Plastic flow tests of thin slabs (**44**-10) Nov. 1947 237

Deformation—Plastic flow of thin slabs (**44**-10) Nov. 1947 237

Deformed bars
–Development of (**44**-20) Feb. 1948 437
–Pull-out test results (**44**-25) March 1948 521

Dehumidification—Basements (**44**-19) Feb. 1948 421

Deleterious materials—Aggregates (**44**-3) Oct. 1947 99

Demolition of Concrete by Freezing (**JPP 44**-194) Dec. 1947 331

Demolition — By freezing — Question (**JPP 44**-194) Dec. 1947 331

Desert housing problems (**44**-34) May 1948 797

Design of Rectangular Tied Columns Subject to Bending With Steel in All Faces (**44**-18) D. R. Cervin Jan. 1948 401

Design Table for Reinforced Concrete Bearing Walls (**JPP 44**-203) Paul Rice June 1948 1058

Design
–Bond and anchorage—Code requirements (**44**-1) Sept. 1947 1
–Coefficients—Columns with combined loads (**44**-18) Jan. 1948 401
–Columns — Code requirements (**44**-1) Sept. 1947 1
–Columns — Rectangular tied (**44**-18) Jan. 1948 401
–Combined loading of columns (**44**-18) Jan. 1948 401
–Flat slabs — Code requirements (**44**-1) Sept. 1947 1
–Flexural computations—Code requirements (**44**-1) Sept. 1947 1
–Footings—Code requirements (**44**-1) Sept. 1947 1
–General reinforced concrete—Code requirements (**44**-1) Sept. 1947 1
–Highways — German autobahnen (**44**-39) June 1948 933
–Normal stresses—Unsymmetrical bending (**44**-31) April 1948 669
–Pavement cross section (**44**-32) April 1948 715
–Pipe aqueduct—Precast (**44**-11) Dec. 1947 261
–Prestressed—Allowance for prestress losses due to creep (**44**-23) Feb. 1948 485
–Shear and diagonal tension—Code requirements (**44**-1) Sept. 1947 1
–Stress analysis — Symmetrical bending (**44**-22) Feb. 1948 457
–Structural—Economy (**44**-15) Jan. 1948 349
–Table—Walls, bearing (**JPP 44**-203) June 1948 1058
–Theory — Advances in 25 years (**44**-32) April 1948 720
–Truss and bent analysis (**44**-9) Nov. 1947 225
–Ultimate theory (**44**-32) April 1948 720
–Walls — Code requirements (**44**-1) Sept. 1947 1

Detector for Locating Reinforcing Bars in Concrete (**JPP 44**-190) L. T. Cleaver Oct. 1947 178

Deterioration of Concrete in Brine Storage Tanks (**44**-5) Inge Lyse Oct. 1947 141
–Disc. Ruth D. Terzaghi and author Part 2, Dec. 1948 148–1

Deterioration of Sacked Cement (**JPP 44**-192)
–Oct. 1947 181
–Thomas J. Bray Jan. 1948 413
–W. Parker Feb. 1948 501

Deterioration
–Barker Dam face (**44**-30) April 1948 633
–Brine storage tanks (**44**-5) Oct. 1947 141
–Caused by cement-aggregate reaction (**44**-3) Oct. 1947 99
–Rate—Sea water exposure (**44**-40) June 1948 977
–Sea water exposure (**44**-40) June 1948 977

Development of Tilt-Up Construction (**44**-35) C. A. Clark May 1948 813

Devonian rocks — Subgrade — German highways (**44**-39) June 1948 933

Dew point
–Definition and determination (**44**-37) May 1948 849
–Temperatures and relative humidities—Tabulated (**44**-37) May 1948 849

Diabase — Reactivity (**JPP 44**-204) June 1948 1058

Diagonal tension
(**44**-32) April 1948 720
–Design for — Code requirements (**44**-1) Sept. 1947 1

Dicalcium sulfide—Occurrence and effect in cement clinker (**44**-38) May 1948 877

Diopside—Reactivity (**44**-3) Oct. 1947 93

D-lines
–Highways in Germany (**44**-39) June 1948 933
–Symptons of deterioration (**44**-42) June 1948 1033

Dolerite — Reactivity (**JPP 44**-204) June 1948 1058

Dolomite
–Reactivity (**44**-3) Oct. 1947 93
–Reactivity tests (**44**-8) Nov. 1947 193

Drainage
–Basement dampness prevention (**44**-19) Feb. 1948 421
–Protection of highway subgrade (**44**-39) June 1948 933
–Provisions — Repair of hydraulic structures (**44**-24) March 1948 513

Dropped beam framing—Cost comparison (**44**-15) Jan. 1948 349

Duct location — Tilt-up walls (**44**-35) May 1948 813

Durability of Concrete Exposed to Sea Water and Alkali Soils — California Experience (**44**-36)
–Thomas E. Stanton May 1948 821
–Disc. Homer M. Hadley, M. Spindel, A. V. Hussey and author Part 2, Dec. 1948 848–1

Durability
–Affected by black coloring agents (**44**-28) April 1948 613
–Affected by soundness of materials (**44**-36) May 1948 821
–Air entrainment effect (**44**-36) May 1948 821
–Comparison of ancient and modern concrete (**44**-42) June 1948 1033
–Effect of aggregate (**44**-32) April 1948 732
–Effect of cement (**44**-32) April 1948 732
–Effect of workmanship (**44**-32) April 1948 732

-Factors affecting German highways (44-39) June 1948 ... 933
-Mix design effect (44-36) May 1948 ... 821
-Pozzolanic cement effect (44-36) May 1948 821
-Progress in 25 years (44-32) April 1948 ... 732
-Studies — Improvements proposed (44-32) April 1948 ... 732
-Sea water and alkali soil effect (44-36) May 1948 ... 821
-Test procedures — Inadequacy of (44-42) June 1948 ... 1033
-Wetting and drying effect (44-36) May 1948 821
-Workmanship effect on (44-36) May 1948. 821

Dust Problem in Loading Truck Mixers (JPP 44-199) Jan. 1948 ... 418

Dyckerhoff cement (44-36) May 1948 ... 821

E

Economy in Structural Design (44-15)
-I. E. Morris Jan. 1948 ... 349
-Disc. Walter H. Wheeler and author Part 2, Dec. 1948 ... 360-1

Economy
-Structural design (44-15) Jan. 1948 ... 349
-Tilt-up construction (44-35) May 1948 ... 813

Edwards, Harlan H.—Disc. Prevention of Dampness in Basements (44-19) Part 2, Dec. 1948 ... 436-1

Effect of Carbon Black and Black Iron Oxide on Air Content and Durability of Concrete (44-28)
-Thomas G. Taylor April 1948 ... 613
-Disc. Leo Kampf and author Part 2, Dec. 1948 ... 624-1

Effect of Gypsum Content and Other Factors on Shrinkage of Concrete Prisms (44-6) Gerald Pickett Oct. 1947 ... 149

Effect of Various Coarse Aggregates Upon the Cement-Aggregate Reaction (44-41) C. H. Scholer and W. E. Gibson June 1948 1009

Elastic frame design—Cost affected by (44-15) Jan. 1948 ... 349

Electrical strain gages—Attached to reinforcing steel (44-7) Nov. 1947 ... 189

Electronic detection — Steel reinforcing bars (JPP 44-190) Oct. 1947 ... 178

Embedded conduits — Code requirements (44-1) Sept. 1947 ... 1

Embedment
-Length required for bond (44-25) March 1948 ... 521
-Straight — Strength tests of (44-12) Dec. 1947 ... 289

Encased steel framing — Cost comparison (44-15) Jan. 1948 ... 349

Engineering progress — Knowledge of concrete (44-14) Jan. 1948 ... 345

Entrained Air Loss in Handling, Placing, Vibrating (JPP 44-202) Lewis H. Tuthill Feb. 1948 ... 504

Entrained air
-Effect on sulfate resistance (44-33) April 1948 ... 745
-Loss during handling and vibration (JPP 44-202) Feb. 1948 ... 504

Epidote—Reactivity (44-3) Oct. 1947 ... 93

Ettringite — Formation in concrete exposed to sea water (44-40) June 1948 ... 977

Evaluation of Aggregate Performance in Pavement Concrete (44-42) H. S. Sweet and K. B. Woods June 1948 ... 1033

Expansion
-Abnormal—Cause of failure (44-42) June 1948 ... 1033
-Affected by exposure — Sand-gravel concrete (44-41) June 1948 ... 1009
-Caused by alkali-aggregate reaction (44-29) April 1948 ... 625
-Cement-aggregate (44-3) Oct. 1947 ... 99
-Measurement — Contours plotted for pier exposed to sea water (44-40) June 1948 ... 977
-Pier exposed to sea water (44-40) June 1948 977
-Sand-gravel concrete (44-41) June 1948 ... 1009

Experimental forms—Long-time study of cement performance (44-21) Feb. 1948 ... 441

Extensions—Bond formula (44-25) March 1948 ... 521

F

Feldspar — Deleterious effect in aggregate (44-36) May 1948 ... 821

Ferguson, Phil M.
-Disc. Bond and Anchorage (44-25) Part 2, Dec. 1948 ... 552-1
-Disc. Laboratory Measurements of Stress Distribution in Reinforcing Steel (44-33) Part 2, Dec. 1948 ... 1056-1

Fineness — Cement — Effect on shrinkage (44-6) Oct. 1947 ... 149

Fire resistance—Pumice concrete (JPP 44-207) June 1948 ... 1062

Fishburn, Cyrus C.
-Prevention of Dampness in Basements (44-19) Feb. 1948 ... 421
-Strength and Slip Under Load of Bent-Bar Anchorages and Straight Embedments in Haydite Concrete (44-12) Dec. 1947 ... 289

Five-Year Temperature Record of a Thin Concrete Dam, The (44-2)
-S. D. Burks Sept. 1947 ... 65
-Disc. Robert E. Glover and author Part 2, Dec. 1948 ... 76-1

Flat slabs — Design — Code requirements (44-1) Sept. 1947 ... 1

Flexural computations — Beams — Code requirements (44-1) Sept. 1947 ... 1
-Slabs — Code requirements (44-1) Sept. 1947 ... 1

Flexural members—Design progress (44-32) April 1948 ... 720

Flint
-Aggregate reactivity (44-3) Oct. 1947 ... 93
-Reactivity tests (44-8) Nov. 1947 ... 193

Floors
-Framing—Cost comparison of four types (44-15) Jan. 1948 ... 349
-Installation—Prefabricated houses (44-34) May 1948 ... 797
-Joist construction — Code requirements (44-1) Sept. 1947 ... 1
-Surface treatment—Stain (44-34) May 1948 797
-Surfaces—Carbon disulfide damage (JPP 44-201) Feb. 1948 ... 503

"Floorstone" — Floor repair (44-34) May 1948 ... 797

Flour storage—Concrete silos (JPP 44-186) Sept. 1947 ... 79

Footings
-Design—Code requirements (44-1) Sept. 1947 ... 1
-Progress in design—25 years (44-32) April 1948 ... 720
-Repair at Barker Dam (44-30) April 1948. 633
-Shear and bond—Code requirements (44-1) Sept. 1947 ... 1
-Sloped or stepped — Code requirements (44-1) Sept. 1947 ... 1

Ford, C. L.—Long-Time Study of Cement Performance in Concrete, Chapter 3—Chemical and Physical Tests of the Cements (44-33) April 1948 ... 745

Fork truck—Materials handling (JPP 44-196) Dec. 1947 ... 332

Form
–Clamps (44-24) March 1948 513
–Clamps—Precast pipe (44-11) Dec. 1947 .. 261
–Design—Code requirements (44-1) Sept. 1947 1
–Removal—Code requirements (44-1) Sept. 1947 1
–Removal—Precast pipe manufacture (44-11) Dec. 1947 261
–Removal — Recommended practice for winter concreting (44-13) Dec. 1947 309
–Vibrators — Precast pipe manufacture (44-11) Dec. 1947 261

Forms
–Chinese problems in construction (44-17) Jan. 1948 381
–Decreased number by change in design (44-15) Jan. 1948 349
–Precast pipe (44-11) Dec. 1947 261
–Precast pumice concrete slabs (44-34) May 1948 797
–Repair work on hydraulic structures (44-24) March 1948 513
–Slabs—Precast (44-30) April 1948 633

Foundations — Dam — Grouting repairs (44-30) April 1948 633

Freezing and thawing tests — Brine storage (44-5) Oct. 1947 141

Freyssinet — Prestress development (44-23) Feb. 1948 485

Frost action—Brine in storage tanks (44-5) Oct. 1947 141

Frost damage — Elimination on German highways (44-39) June 1948 933

Frost resistance — Affected by black coloring agents (44-28) April 1948 613
–Test program in long-time study (44-21) Feb. 1948 441

Fruchtbaum, Jacob—Storage of Bulk Flour in Concrete Silos (JPP 44-186) Sept. 1947. 79

Furring strips — Attaching to concrete masonry walls (44-37) May 1948 849

G

Gatineau Power Company—Repair of hydraulic structures (44-24) March 1948 .. 513

Gel formation — Alkali-aggregate reaction (44-29) April 1948 625

Geological structure—Soil of Germany (44-39) June 1948 933

German highways — Traffic conditions (44-39) June 1948 933

Germany
–Climatological comparison with United States (44-39) June 1948 933
–Geology (44-39) June 1948 933
–Highways — Report of inspection (44-39) June 1948 933
–Soil conditions (44-39) June 1948 933

Getman, H. E.—Material Handling Simplified on Community School Project (JPP 44-196) Dec. 1947 332

Gibson, W. E.—Effect of Various Coarse Aggregates upon the Cement-Aggregate Reaction (44-41) June 1948 1009

Glass—Formation in cement clinker (44-38) May 1948 877

Gliddon, Claude—Repairing Concrete Hydraulic Structures (44-24) March 1948 513

Glover, Robert E. — Disc. Five-Year Temperature Record of a Thin Concrete Dam, The (44-2) Part 2, Dec. 1948 76–1

Goldberg, John E. — Analysis of Two-Column Symmetrical Bents and Vierendeel Trusses Having Parallel and Equal Chords (44-9) Nov. 1947 225

Granite—Reactivity tests (44-8) Nov. 1947. 193

Granite blocks—Fractures due to pressure of expanding concrete (44-40) June 1948 .. 977

Gravel — Varied sources — Reactivity tests (44-8) Nov. 1947 193

Greene, Kenneth T.
–Disc. Aggregate Reaction with Cement Alkalies (44-29) Part 2, Dec. 1948 632–1
–Cement-Aggregate Reaction in Concrete (44-3) Oct. 1947 93
–Chemical Test for Reactivity of Concrete Aggregates with Cement Alkalies; Chemical Processes in Cement-Aggregate Reaction (44-8) Nov. 1947 193

Greensand — Subgrade — German highways (44-39) June 1948 933

Grout
–Coatings — Basement walls (44-19) Feb. 1948 421
–Mixing and consistency (44-30) April 1948. 633
–Pumping system (44-30) April 1948 633

Grouting Repair of Masonry Arch (JPP 44-200) E. C. Harding Feb. 1948 502

Grouting
–Arch repair—Masonry (JPP 44-200) Feb. 1948 502
–Dam foundation repair (44-30) April 1948. 633
–Leakage elimination in hydraulic structures (44-24) March 1948 513
–Plant — Barker Dam repair (44-30) April 1948 633

Gunite — Waterproofing masonry walls (44-19) Feb. 1948 421

Gypsum content of cement—Effect on shrinkage of concrete (44-6) Oct. 1947 149

H

Hadley, Homer M. — Disc. Durability of Concrete Exposed to Sea Water and Alkali Soils—California Experience (44-36) Part 2, Dec. 1948 848–1

Hall, Bert A.—Crack Control in Portland Cement Plaster Panels (44-4) Oct. 1947 ... 129

Handling and placing — Barker Dam — Original construction (44-30) April 1948 ... 633

Hansen, W. C. — Long-Time Study of Cement Performance in Concrete Chapter 2 — Manufacture of the Test Cements (44-26) March 1948 553

Hansen's hypothesis — Alkali-aggregate reaction (44-29) April 1948 625

Harding, E. C. — Grouting Repair of Masonry Arch (JPP 44-200) Feb. 1948 ... 502

Haydite concrete—Tests of anchorage and embedment in (44-12) Dec. 1947 289

Heat loss—Calculation for typical residence (44-37) May 1948 849

Heat of hydration—Variation with cement composition (44-38) May 1948 877

Heat of solution—Cement heat of hydration determination (44-33) April 1948 745

Heat transfer
–Concept of (44-37) May 1948 849
–Measurement (44-37) May 1948 849
–Symbols (44-37) May 1948 849

Heat transmission coefficient—Computation of (44-37) May 1948 849
–Tabulated for various building materials (44-37) May 1948 849

Heating—Condensation preventive in basements (44-19) Feb. 1948 421

Heating materials—Recommended practice —Winter concreting (44-13) Dec. 1947 309

Hennebique — System of reinforcement (44-20) Feb. 1948 437

Highlights of the Development of Reinforced Concrete and the Study of Bond (44-20) Arthur P. Clark Feb. 1948..... 437
–Disc.—C. M. Spofford Part 2, Dec. 1948..440–1

Highway
–Conditions — Germany 1947 (44-39) June 1948..... 933
–Design — German autobahnen (44-39) June 1948..... 933
–Pavement construction—Improvements in 25 years (44-32) April 1948..... 715
–Subgrade — German treatment (44-39) June 1948..... 933
–Surface treatment — Germany (44-39) June 1948..... 933

Hirschthal, M. — Disc. Progress with Concrete, 1923-1948 (44-32) Part 2, Dec. 1948.744–1

History
–Concrete usage (44-20) Feb. 1948..... 437
–Development of concrete knowledge (44-14) Jan. 1948..... 345
–Progress and problems in concrete (44-32) April 1948..... 693
–Reinforcement in concrete (44-20) Feb. 1948..... 437

Holland, William Y.
–Cement-Aggregate Reaction in Concrete (44-3) Oct. 1947..... 93
–Disc. Aggregate Reaction with Cement Alkalies (44-29) Part 2, Dec. 1948.....632–1

Honeycombing — Pier deterioration (44-36) May 1948..... 821

Hooks
–Bond formula (44-25) March 1948..... 521
–Code requirements (44-1) Sept. 1947..... 1

Hornblende—Reactivity (44-3) Oct. 1947.. 93

"Hot Cement" Effect on Concrete Mix Temperature (JPP 44-189) Myron A. Swayze Dec. 1947..... 330

Houses — Prefabricated — Erection (44-34) May 1948..... 797

Housing — Thermal insulation (44-37) May 1948..... 849

Housing project — Prefabricated pumice concrete (44-34) May 1948..... 797

How Much Wall is Effective in Stiffening a Concrete Beam? (JPP 44-187) Allen H. Brownfield Sept. 1947..... 80

Hussey, A. V.—Disc. Durability of Concrete Exposed to Sea Water and Alkali Soils—California Experience (44-36) Part 2, Dec. 1948.....848–1

Hydraulic structures — Repair (44-24) March 1948..... 513

I

Ibeco — Cement bag material (**JPP 44-192**) Jan. 1948..... 413

Impermeability — Importance to durability (44-36) May 1948..... 821

Insley, Herbert—Aggregate Reaction with Cement Alkalies (44-29) April 1948..... 625

Inspection—Importance of (44-32) April 1948..... 720

Inspection practices — Improvement in 25 years (44-32) April 1948..... 693

Insulation
–Attaching to concrete masonry walls (44-37) May 1948..... 849
–Basements—Prevents condensation (44-19) Feb. 1948..... 421
–Effect of progressive (44-37) May 1948.... 849
–Fill type (44-37) May 1948..... 849
–Reflective type (44-37) May 1948..... 849
–Rigid or board form (44-37) May 1948.... 849
–Semi-rigid or flexible (44-37) May 1948... 849
–Thermal — Concrete homes (44-37) May 1948..... 849
–Value of — Based on temperature computation (44-37) May 1948..... 849

Integral Waterproofing Materials for Concrete (JPP 44-185)
–E. H. Logan Dec. 1947..... 329
–W. E. Parker Sept. 1947..... 77

Interstitial material — Clinker analysis (44-38) May 1948..... 877

Intrusion agent — Use in foundation grouting (44-30) April 1948..... 633

Iron
–Cause of pop-outs in cinder concrete (44-16) Jan. 1948..... 361
–Cause of staining in cinder concrete (44-16) Jan. 1948..... 361
–Metallic — Occurrence and effect in cement clinker (44-38) May 1948..... 877

Iron compound — Coating for basement walls (44-19) Feb. 1948..... 421

Iron oxide—Coarse aggregate (**JPP 44-191**) Oct. 1947..... 181

J

Jackson, F. H.—Concrete Pavements on the German Autobahnen (44-39) June 1948... 933

Jackson — Failure classifications (44-42) June 1948..... 1033

Jansen, E. Clinton—Restoration of Barker Dam (44-30) April 1948..... 633

Japanese concreting — Work in China (44-17) Jan. 1948..... 381

Joints
–Construction — Code requirements (44-1) Sept. 1947..... 1
–Dam face repair (44-30) April 1948..... 633
–Faulting — Highways in Germany (44-39) June 1948..... 933
–German highway practice (44-39) June 1948 933
–Pavement (44-32) April 1948..... 715
–Pumping—Elimination on German highways (44-39) June 1948..... 933
–Repair concrete on hydraulic structures (44-24) March 1948..... 513
–Rotation—Analysis of bents and trusses (44-9) Nov. 1947..... 225

Joist floor construction—Code requirements (44-1) Sept. 1947..... 1

Jumping frog—Compaction of cohesionless sand (44-39) June 1948..... 933

K

Kampf, Leo—Disc. Effect of Carbon Black and Black Iron Oxide on Air Content and Durability of Concrete (44-28) Part 2, Dec. 1948.....624–1

Kansas aggregates — Reactivity studies (44-41) June 1948..... 1009

Kaolin
–Reactivity (44-3) Oct. 1947..... 93
–Reactivity tests (44-8) Nov. 1947..... 193

Kiln
–Characteristics — Long-time study report (44-26) March 1948..... 553
–Feed — Control and preparation (44-26) March 1948..... 553
–Gun — Removal of clinker rings (**JPP 44-188**) Oct. 1947..... 177
–Operation — Cement manufacture (44-26) March 1948..... 553
–Temperature — Observations (44-26) March 1948..... 553

"Knap" concrete unit walls (44-19) Feb. 1948..... 421

L

Laboratory Measurements of Stress Distribution in Reinforcing Steel (44-43) Douglas McHenry and W. T. Walker June 1948 ... 1041
–Disc. Phil M. Ferguson and authors Part 2, Dec. 1948 ... 1056–1
Labor—Economies effected by structural design (44-15) Jan. 1948 ... 349
Labor costs—China (44-17) Jan. 1948 ... 381
Lambot—Reinforced concrete development history (44-20) Feb. 1948 ... 437
Larson, Albert O.—Disc. Prevention of Dampness in Basements (44-19) Part 2, Dec. 1948 ... 436–1
Lash, S. D.—Disc. Bond and Anchorage (44-25) Part 2, Dec. 1948 ... 552–1
Laykold waterproofing — Roof surface treatment (44-34) May 1948 ... 797
Lerch, William — Long-Time Study of Cement Performance in Concrete, Chapter 3—Chemical and Physical Tests of the Cements (44-33) April 1948 ... 745
Lightweight aggregate — Pumice (**JPP** 44-207) June 1948 ... 1062
Lightweight concrete — Pumice aggregate (44-34) May 1948 ... 797
Lime
–Free — Cause of pop-outs in cinder concrete (44-16) Jan. 1948 ... 361
–Free — Occurence and effect in cement clinker (44-38) May 1948 ... 877
–Treatment — Cinder aggregate (44-16) Jan. 1948 ... 361
Limestone
–Addition to sand-gravel for durability of concrete (44-41) June 1948 ... 1009
–Stained by mortar (44-32) April 1948 ... 700
–Subgrade — German highways (44-39) June 1948 ... 933
–Various kinds — Reactivity tests (44-8) Nov. 1947 ... 193
Limonite as Coarse Aggregate (**JPP** 44-191) Richard C. Mielenz Oct. 1947 ... 181
Limonite—Coarse aggregate (**JPP** 44-191) Oct. 1947 ... 181
Liter weight—Clinker composition related to (44-38) May 1948 ... 877
Liter weight tests — Clinker samples (44-26) March 1948 ... 553
Loess soil—Germany (44-39) June 1948 ... 933
Logan, E. H. — Integral Waterproofing Materials for Concrete (**JPP** 44-185) Dec. 1947 ... 329
Long-Time Study of Cement Performance in Concrete, Chapter 1—History and Scope (44-21) F. R. McMillan and I. L. Tyler Feb. 1948 ... 441
Long-Time Study of Cement Performance in Concrete, Chapter 2—Manufacture of the Test Cements (44-26)
–F. R. McMillan and W. C. Hansen March 1948 ... 553
–Disc.—Harry L. McNeill and author Part 2, Dec. 1948 ... 604–1
Long-Time Study of Cement Performance in Concrete, Chapter 3—Chemical and Physical Tests of the Cements (44-33) William Lerch and C. L. Ford April 1948 ... 745
Long-Time Study of Cement Performance in Concrete, Chapter 4—Microscopical Study of Clinkers (44-38) L. S. Brown May 1948 ... 877
Long-time study
–Cement analysis for (44-33) April 1948 ... 745
–Cement manufacture for (44-26) March 1948 ... 553
–Cement performance — Development of program (44-21) Feb. 1948 ... 441
–Cement performance — History and background (44-21) Feb. 1948 ... 441
–Clinker observations (44-38) May 1948 ... 877
Lung Chi Ho hydroelectric development —Diversion and storage dams (44-17) Jan. 1948 ... 381
Lurie, Erwin M.—Disc. Crack Control in Portland Cement Plaster Panels (44-4) Part 2, Dec. 1948 ... 140–1
Lyse, Inge—Deterioration of Concrete in Brine Storage Tanks (44-5) Oct. 1947 ... 141

M

Magnel, Gustave—Creep of Steel and Concrete in Relation to Prestressed Concrete (44-23) Feb. 1948 ... 485
Magnesia — Free — Cause of pop-outs in cinder concrete (44-16) Jan. 1948 ... 361
Magnesium oxide
–Cement content — Effect on expansion (44-41) June 1948 ... 1009
–Occurrence and effect in cement clinker (44-38) May 1948 ... 877
Magnesium sulfate — Effect on durability (44-36) May 1948 ... 821
Magnetic separation — Cinder aggregate (44-16) Jan. 1948 ... 361
Manchuria—Cement manufacture in (44-17) Jan. 1948 ... 381
Map cracking — Sand-gravel concrete (44-41) June 1948 ... 1009
Marble—Reactivity tests (44-8) Nov. 1947 ... 193
Marl—Subgrade—German highways (44-39) June 1948 ... 933
Masonry—Chinese practices in construction (44-17) Jan. 1948 ... 381
Masonry walls—Basement (44-19) Feb. 1948 ... 421
Material Handling Simplified on Community School Project (**JPP** 44-196) H. E. Getman Dec. 1947 ... 332
Materials
–German highway construction (44-39) June 1948 ... 933
–Handling—Fork truck (**JPP** 44-196) Dec. 1947 ... 332
–Quality—Code requirements (44-1) Sept. 1947 ... 1
–Soundness effect on concrete durability (44-36) May 1948 ... 821
–Storage—Code requirements (44-1) Sept. 1947 ... 1
–Testing—Code requirements (44-1) Sept. 1947 ... 1
Mather, Bryant — Chemical Reactivity of Dolerite (Diabase) (**JPP** 44-204) June 1948 1058
Mathews, H. L. — Prefabricated Pumice Concrete Houses (44-34) May 1948 ... 797
McConnell, Duncan
–Cement-Aggregate Reaction in Concrete (44-3) Oct. 1947 ... 93
–Disc. Aggregate Reaction with Cement Alkalies (44-29) Part 2, Dec. 1948 ... 632–1
McHenry, Douglas—Laboratory Measurements of Stress Distribution in Reinforcing Steel (44-43) June 1948 ... 1041
McMillan, F. R.
–Long-Time Study of Cement Performance in Concrete, Chapter 1—History and Scope (44-21) Feb. 1948 ... 441
–Long-Time Study of Cement Performance in Concrete, Chapter 2—Manufacture of the Test Cements (44-26) March 1948 ... 553

McNeill, Harry L.—Disc. Long-Time Study of Cement Performance in Concrete, Chapter 2 — Manufacture of the Test Cements (44-26) Part 2, Dec. 1948.....604–1
Meissner, H. S. — Vibration of Air-Entrained Concrete (JPP 44-182) Oct. 1947.. 182
Membrane waterproofing — Basement walls (44-19) Feb. 1948..... 421
Microcline
–Reactivity (44-3) Oct. 1947..... 93
–Reactivity tests (44-8) Nov. 1947..... 193
Microscopic studies—Mineral composition of clinkers (44-38) May 1948..... 877
Microscopic study techniques — Alkali-aggregate reaction (44-29) April 1948..... 625
Mielenz, Richard C.
–Cement-Aggregate Reaction in Concrete (44-3) Oct. 1947..... 93
–Chemical Test for Reactivity of Concrete Aggregates with Cement Alkalies, Chemical Processes in Cement-Aggregate Reaction (44-8) Nov. 1947..... 193
–Limonite as Coarse Aggregate (JPP 44-191) Oct. 1947..... 181
–Disc. Aggregate Reaction with Cement Alkalies (44-29) Part 2, Dec. 1948.....632–1
Mix design
–Barker Dam — Original construction (44-30) April 1948..... 633
–Best use of sand-gravel aggregate (44-41) June 1948..... 1009
–Effect on durability (44-36) May 1948.... 821
–Patching material for hydraulic structures (44-24) March 1948..... 513
–Pier concrete (44-40) June 1948..... 977
–Precast pipe (44-11) Dec. 1947..... 261
–Pumice concrete (44-34) May 1948..... 797
–Zero slump concrete — German practice (44-39) June 1948..... 933
Mixers — Truck — Dust problem in loading (JPP 44-199) Jan. 1948..... 418
Mix proportioning — Methods of (44-14) Jan. 1948..... 345
Mixing
–Code requirements (44-1) Sept. 1947..... 1
–Temperature of ingredients (JPP 44-189) Dec. 1947..... 330
Mixing and placing
–Chinese methods (44-17) Jan. 1948..... 381
–Methods of 1894 (44-36) May 1948..... 821
Modulus of elasticity
–Concrete in compression (44-22) Feb. 1948 457
–Concrete in tension (44-22) Feb. 1948..... 457
Moist storage — Cinder aggregate (44-16) Jan. 1948..... 361
Moisture
–Condensation—Theory (44-19) Feb. 1948.. 421
–Protection — SR-4 gage — Attached to reinforcing steel (44-7) Nov. 1947..... 189
Moment calculation — Truss and bent analysis (44-9) Nov. 1947..... 225
Moment resistance — Wall action with beam (JPP 44-187) Sept. 1947..... 80
Monier — Reinforced concrete development history (44-20) Feb. 1948..... 437
Montmorillonite — Reactivity (44-3) Oct. 1947..... 93
Morris, I. E.—Economy in Structural Design (44-15) Jan. 1948..... 349
Morris Mark — Sawing and Cutting Concrete Specimens (JPP 44-198) June 1948.. 1057
Mortar
–Basement masonry walls (44-19) Feb. 1948 421
–Brine effect—Frost action (44-5) Oct. 1947 141
–Chinese mix design (44-17) Jan. 1948..... 381
–Coatings — Basement walls (44-19) Feb. 1948..... 421
–Durability tests — Sodium and magnesium sulfate (44-36) May 1948..... 821
–Expansion tests — Aggregate reactivity (44-8) Nov. 1947..... 193
–Gun—Patching pipe (44-11) Dec. 1947.... 261
–Tests — Air content affected by coloring agent (44-28) April 1948..... 613
–Tests—Strength of cement (44-33) April 1948..... 745
Mud-pumping — Highways in Germany (44-39) June 1948..... 933
Muffler—Form vibrators (44-11) Dec. 1947. 261
Muscovite—Reactivity (44-3) Oct. 1947.... 93
Mylrea, T. D.—Bond and Anchorage (44-25) March 1948..... 521

N

Nailability — Pumice concrete (JPP 44-207) June 1948..... 1062
Nails — Copper alloy to penetrate Nailcrete —Question (JPP 44-195) Dec. 1947..... 332
Neelands, W. T. — Restoration of Barker Dam (44-30) April 1948..... 633
Neoprene
–Water stops (44-30) April 1948..... 633
–Waterproofing SR-4 gages (44-43) June 1948..... 1041
Nepheline—Reactivity (44-3) Oct. 1947.... 93
Neutral axis
–Location of symmetrical bending (44-22) Feb. 1948..... 457
–Location—Unsymmetrical bending (44-31) April 1948..... 669
Nitrogen adsorption test—Clinker surface area (44-38) May 1948..... 877
"Normac" houses (44-34) May 1948..... 797
Normal Stresses in Reinforced Concrete Sections Under Unsymmetrical Bending (44-31) Michel Bakhoum April 1948.. 669
Norway—Brine tank disintegration (44-5) Oct. 1947..... 141
Novaculite — Reactivity tests (44-8) Nov. 1947..... 193

O

Obsidian
–Brown—Reactivity tests (44-8) Nov. 1947. 193
–Green—Reactivity tests (44-8) Nov. 1947. 193
Oligoclase
–Reactivity (44-3) Oct. 1947..... 93
–Reactivity tests (44-8) Nov. 1947..... 193
Olivine—Reactivity (44-3) Oct. 1947..... 93
Opal
–Aggregate reactivity (44-3) Oct. 1947..... 99
–Alkali-aggregate reaction tests (44-29) April 1948..... 625
–Reactivity tests (44-8) Nov. 1947..... 193
Opaline chert — Reactivity (44-36) May 1948..... 821
Osmosis — Occurrence in alkali-aggregate reaction (44-29) April 1948..... 625
Osmotic pressures — Cement aggregate reaction (44-3) Oct. 1947..... 99
Outdoor concrete — Deterioration (44-14) Jan. 1948..... 345

P

Paint—Cement-water for concrete surfaces (44-34) May 1948..... 797
Parker, W. E.
–Deterioration of Sacked Cement (JPP 44-192) Feb. 1948..... 501
–Integral Waterproofing Materials for Concrete (JPP 44-185) Sept. 1947..... 77

Parsons, Willard H.—Aggregate Reaction with Cement Alkalies (**44-29**) April 1948.. 625

Paste—Microscopical and chemical analyses —After sea water exposure (**44-40**) June 1948..... 977

Patching — Pipe — Mortar gun use (**44-11**) Dec. 1947..... 261

Pavement
–Concrete—Aggregate in—General (**44-42**) June 1948..... 1033
–Concrete—Durability (**44-32**) April 1948.. 715
–Concrete—Mix design (**44-32**) April 1948.. 715
–Construction — Foundation importance (**44-32**) April 1948..... 715
–Construction — Test sections for long-time study (**44-21**) Feb. 1948..... 441
–Cross section—Design (**44-32**) April 1948.. 715
–Cross section—German design (**44-39**) June 1948..... 933
–Joints (**44-32**) April 1948..... 715
–Reinforcement (**44-32**) April 1948..... 715

Paving operations — German practice (**44-39**) June 1948..... 933

Pearson, J. C.—Progress with Concrete, 1923-1948 (**44-32**) April 1948..... 693

Peat bog areas—Germany (**44-39**) June 1948 933

Perlite—Reactivity tests (**44-8**) Nov. 1947.. 193

Permeability
–Mix design effect on (**JPP 44-185**) Dec. 1947..... 329
–Pier concrete after sea water exposure (**44-40**) June 1948..... 977

Pessimum proportion — Aggregate reactivity (**44-8**) Nov. 1947..... 193

Petrographic determination—Aggregate reactivity (**44-8**) Nov. 1947..... 193

Petrographic examination (**44-3**) Oct. 1947 93

Petrographic study techniques—Alkali-aggregate reaction (**44-29**) April 1948..... 625

Phlogopite—Reactivity (**44-3**) Oct. 1947... 93

Phyllite—Reactivity tests (**44-8**) Nov. 1947. 193

Pickett, Gerald—Effect of Gypsum Content and Other Factors on Shrinkage of Concrete Prisms (**44-6**) Oct. 1947..... 149

Pier jackets — Precast concrete (**44-36**) May 1948..... 821

Piers
–Deterioration in sea water (**44-40**) June 1948..... 977
–Expansion and cracking — Sea water exposure (**44-40**) June 1948..... 977
–Ferry Building, San Francisco — Construction (**44-36**) May 1948..... 821

Piles
–Deterioration in sea water — California (**44-36**) May 1948..... 821
–Wood with precast concrete casings (**44-36**) May 1948..... 821

Pipe
–High head—Precast (**44-11**) Dec. 1947.... 261
–Low head—Precast (**44-11**) Dec. 1947..... 261
–Precast — Cement specifications (**44-11**) Dec. 1947..... 261
–Precast—Curing (**44-11**) Dec. 1947..... 261
–Precast—Design (**44-11**) Dec. 1947..... 261
–Precast—Form removal (**44-11**) Dec. 1947. 261
–Precast—Forms (**44-11**) Dec. 1947..... 261
–Precast for San Diego Aqueduct (**44-11**) Dec. 1947..... 261
–Precast — Handling and transporting (**44-11**) Dec. 1947..... 261
–Precast — Manufacturing plant layout (**44-11**) Dec. 1947..... 261
–Precast—Mix design (**44-11**) Dec. 1947.... 261
–Pipe — Precast — Placing concrete (**44-11**) Dec. 1947..... 261
–Precast—Reinforcement (**44-11**) Dec. 1947 261
–Precast—Vibration (**44-11**) Dec. 1947..... 261

Pitch—Joint filler—Hydraulic repairs (**44-24**) March 1948..... 513

Pitchstone — Reactivity tests (**44-8**) Nov. 1947..... 193

Placing
–Chute method (**44-32**) April 1948..... 693
–Code requirements (**44-1**) Sept. 1947..... 1

Placing concrete—Precast pipe (**44-11**) Dec. 1947..... 261

Plant layout
–Concreting operations — Sungari project, China (**44-17**) Jan. 1948..... 381
–Pipe manufacture (**44-11**) Dec. 1947..... 261

Plaster
–Portland cement — Cracking (**44-4**) Oct. 1947..... 129
–Portland cement—Curing (**44-4**) Oct. 1947 129
–Portland cement — Restrained method of installation (**44-4**) Oct. 1947..... 129
–Portland cement — Shrinkage (**44-4**) Oct. 1947..... 129
–Portland cement — Unrestrained method of installation (**44-4**) Oct. 1947..... 129

Plastic deformation—History of theory (**44-32**) April 1948..... 720

Plastic Flow of Thin Reinforced Concrete Slabs (**44-10**) George W. Washa Nov. 1947 237

Plastic flow
–Test procedure—Slabs (**44-10**) Nov. 1947.. 237
–Thin slabs (**44-10**) Nov. 1947..... 237

Plastic shield — SR-4 gage — Moisture and pressure protection (**44-7**) Nov. 1947..... 189

Plum stones — Aggregate — Mass concrete (**44-30**) April 1948..... 633

Plywood — Protection — Winter concreting (**44-13**) Dec. 1947..... 309

Pop-outs — Caused by cinder aggregate (**44-16**) Jan. 1948..... 361

Portland Cement Association—Long-time study of cement (**44-21**) Feb. 1948..... 441

Portland cement plaster — Shrinkage control (**44-4**) Oct. 1947..... 129

Portlandite, primary — Loss in concrete exposed to sea water (**44-40**) June 1948... 977

Posey, C. J.—Disc. Strength and Slip Under Load of Bent-Bar Anchorages and Straight Embedments in Haydite Concrete (**44-12**) Part 2, Dec. 1948.....308–1

Potassium hydroxide — Aggregate reactivity test (**44-8**) Nov. 1947..... 193

Pozzolanic cement
–Effect on durability (**44-36**) May 1948.... 821
–Effect on durability (**44-32**) April 1948.... 732

Precast members — Problems and progress (**44-32**) April 1948..... 720

Precast pipe—San Diego Aqueduct (**44-11**) Dec. 1947..... 261

Precasting Concrete Pipe for the San Diego Aqueduct (**44-11**) D. K. Woodin Dec. 1947..... 261

Prefabricated houses—Pumice concrete (**44-34**) May 1948..... 797

Prefabricated Pumice Concrete Houses (**44-34**) H. L. Mathews May 1948..... 797

Prehnite—Reactivity (**44-3**) Oct. 1947..... 93

Prepakt — Aggregate processing (**44-30**) April 1948..... 633

Prepakt process
–Details of use at Barker Dam (**44-30**) April 1948..... 633
–Grout used (**44-30**) April 1948..... 633

President's Address (**44-27**) Stanton Walker April 1948..... 605

Pressure
–Lateral, on forms for Prepakt concrete (**44-30**) April 1948 ... 633
–Osmotic, cement-aggregate reaction (**44-3**) Oct. 1947 ... 99

Prestress — Losses due to creep (**44-23**) Feb. 1948 ... 485

Prestressed concrete — Creep affecting (**44-23**) Feb. 1948 ... 485

Prestressing — Development in the past 25 years (**44-32**) April 1948 ... 720

Prevention of Dampness in Basements (**44-19**)
–Cyrus C. Fishburn Feb. 1948 ... 421
–Disc. Albert O. Larson, Harlan H. Edwards and author Part 2, Dec. 1948 ... 436–1

Prochlorite—Reactivity (**44-3**) Oct. 1947 ... 93

Product of inertia method—Stress analysis —Unsymmetrical bending (**44-31**) April 1948 ... 669

Progress with Concrete, 1923-1948 (**44-32**)
–Waldo G. Bowman, P. H. Bates, J. C. Pearson, Roy W. Crum, Frank E. Richart, and Roderick B. Young April 1948 ... 693
–Disc. R. D. Rader, M. Hirschthal and authors Part 2, Dec. 1948 ... 744–1

Proportions — Mix — Code requirements (**44-1**) Sept. 1947 ... 1

Proposed Recommended Practice for Winter Concreting Methods (**44-13**) Report of Committee 604 Dec. 1947 ... 309

Protection of Electric Strain Gages in Concrete (**44-7**)
–R. H. Sherlock and Adil Belgin Nov. 1947. 189
–Disc. Byron L. Whitney and authors Part 2, Dec. 1948 ... 192–1

Pull-out problems — Bond unit stress variation (**44-25**) March 1948 ... 521

Pull-out tests
–Bent-bar anchorages — Haydite concrete (**44-12**) Dec. 1947 ... 289
–Straight embedments — Haydite concrete (**44-12**) Dec. 1947 ... 289

Pumice aggregate—Sources (**44-34**) May 1948 ... 797
–Nature and composition (**JPP 44-207**) June 1948 ... 1062

Pumice Concrete (**JPP 44-207**) June 1948. 1062

Pumice concrete
–Composition (**JPP 44-207**) June 1948 ... 1062
–Economy (**JPP 44-207**) June 1948 ... 1062
–Fire resistance (**JPP 44-207**) June 1948 ... 1062
–General properties (**JPP 44-207**) June 1948 1062
–Mix design (**44-34**) May 1948 ... 797
–Properties (**44-34**) May 1948 ... 797
–Specifications for housing (**44-34**) May 1948 797
–Strength (**JPP 44-207**) June 1948 ... 1062
–Thermal conductivity (**44-34**) May 1948 .. 797
–Thermal conductivity (**JPP 44-207**) June 1948 ... 1062
–Weight (**JPP 44-207**) June 1948 ... 1062

Pumps—Grout distribution system (**44-30**) April 1948 ... 633

Pyrex glass — Reactivity tests (**44-8**) Nov. 1947 ... 193

Pyrite—Cinder aggregate (**44-16**) Jan. 1948. 361

Pyrometer — Portable recording — Kiln temperature measurement (**44-26**) March 1948 ... 553

Q

Quality—Code requirements (**44-1**) Sept. 1947 ... 1

Quality control — Pavement construction (**44-32**) April 1948 ... 715

Quartz
–Reactivity (**44-3**) Oct. 1947 ... 93
–Reactivity tests (**44-8**) Nov. 1947 ... 193

R

Rader, R. D.—Disc. Progress with Concrete, 1923-1948 (**44-32**) Part 2, Dec. 1948 ... 744–1

Ransome
–Deformed bar for bond (**44-20**) Feb. 1948. 437
–Reinforced concrete development history (**44-20**) Feb. 1948 ... 437

Reactivity — Aggregate — Chemical test (**44-8**) Nov. 1947 ... 193

Ready-mixed concrete — Early use of (**44-32**) April 1948 ... 705

Reinforced concrete — Historical background (**44-20**) Feb. 1948 ... 437

Reinforcement
–Anchorage — Code requirements (**44-1**) Sept. 1947 ... 1
–Arrangement — Flat slabs — Code requirements (**44-1**) Sept. 1947 ... 1
–Beam — Cut-off bars (**44-25**) March 1948. 521
–Bent anchorages (**44-12**) Dec. 1947 ... 289
–Cage winding machine—Pipe (**44-11**) Dec. 1947 ... 261
–Deformed vs. plain — Anchorage tests (**44-12**) Dec. 1947 ... 289
–Details—Precast slabs (**44-30**) April 1948 633
–Lug effect on strength of anchorage (**44-12**) Dec. 1947 ... 289
–Pavement — German practice (**44-39**) June 1948 ... 933
–Pavement slab (**44-32**) April 1948 ... 715
–Pipe — "Cage" type (**44-11**) Dec. 1947 ... 261
–Pipe — Cylinder type (**44-11**) Dec. 1947 .. 261
–Placing and handling—Code requirements (**44-1**) Sept. 1947 ... 1
–Protective covering—Code requirements (**44-1**) Sept. 1947 ... 1
–Splicing — Code requirements (**44-1**) Sept. 1947 ... 1
–Straight embedment (**44-12**) Dec. 1947 289
–Systems—Development (**44-20**) Feb. 1948. 437
–Usage — History of development (**44-20**) Feb. 1948 ... 437

Reinforcing bars — Location by electronic devices (**JPP 44-190**) Oct. 1947 ... 178

Reinforcing steel
–Chinese production and use (**44-17**) Jan. 1948 ... 381
–Stress distribution measurement (**44-43**) June 1948 ... 1041

Relative humidities and dew point temperatures — Tabulated (**44-37**) May 1948 ... 849

Removing Clinker Rings from Rotary Kilns (**JPP 44-188**) Oct. 1947 ... 177

Repair
–Barker Dam restoration (**44-30**) April 1948 633
–Cracks in basement walls (**44-19**) Feb. 1948 421
–Dam surfaces (**44-30**) April 1948 ... 633
–Emergency—Dam in China (**44-17**) Jan. 1948 ... 381
–Hydraulic structures (**44-24**) March 1948.. 513
–Permeable basement walls (**44-19**) Feb. 1948 ... 421

Repairing Concrete Hydraulic Structures (**44-24**) Claude Gliddon March 1948 ... 513

Research programs — Spirit and scope (**44-32**) April 1948 ... 693

Restoration of Barker Dam (**44-30**) Raymond E. Davis, E. Clinton Jansen and W. T. Neelands April 1948 ... 633
–Disc. Paul Baumann and J. W. Robison Part 2, Dec. 1948 ... 668–1

Restrained method — Plaster construction (**44-4**) Oct. 1947 ... 129

Rhyolite—Reactivity tests (**44**-8) Nov. 1947 193
Rice, Paul—Design Table for Reinforced Concrete Bearing Walls (**JPP 44**-203) June 1948 1058
Richard, E. L.—Anchor Bolts Set in Drilled Holes (**JPP 44**-183) Sept. 1947 81
Richart, Frank E.—Progress with Concrete, 1923-1948 (**44**-32) April 1948 693
Robison, J. W.—Disc. Restoration of Barker Dam (**44**-30) Part 2, Dec. 1948 668–1
Rockwood, Nathan C.—Disc. Concrete Pavements on the German Autobahnen (**44**-39) Part 2, Dec. 1948 976–1
Roman concreting methods — Vitruvius (**44**-42) June 1948 1033
Roof — Surface treatment — Laykold waterproofing (**44**-34) May 1948 797
Roof slab — Installation — Prefabricated houses (**44**-34) May 1948 797

S

Safety factor—Bond (**44**-25) March 1948 521
Sand
–Fill material on German highways (**44**-39) June 1948 933
–Various kinds — Reactivity tests (**44**-8) Nov. 1947 193
Sand-gravel
–Deleterious effect on concrete (**44**-42) June 1948 1033
–Difficulties in use of (**44**-41) June 1948 1009
–Sources and description (**44**-41) June 1948 1009
–Tested in concrete specimens (**44**-41) June 1948 1009
San Diego Aqueduct—Pipe for (**44**-11) Dec. 1947 261
Sandstone—Chinese use as aggregate (**44**-17) Jan. 1948 381
Sawing and Cutting Concrete Specimens (**JPP 44**-198)
–R. F. Blanks Jan. 1948 416
–Mark Morris, June 1948 1057
Sawing concrete
–Diamond blade saw (**JPP 44**-198) Jan. 1948 416
–Experience (**JPP 44**-198) June 1948 1057
–Gang saw (**JPP 44**-198) Jan. 1948 416
Scaling
–Affected by black coloring agents (**44**-28) April 1948 613
–Highway surfaces — Germany (**44**-39) June 1948 933
–Pavement—Causes (**44**-42) June 1948 1033
Schist—Reactivity tests (**44**-8) Nov. 1947 193
Scholer, C. H.—Effect of Various Coarse Aggregates Upon the Cement-Aggregate Reaction (**44**-41) June 1948 1009
Seaton, S. G.—Study of Causes and Prevention of Staining and Pop-outs in Cinder Concrete (**44**-16) Jan. 1948 361
Sea water
–Attack on concrete (**44**-36) May 1948 821
–Deleterious effect on concrete (**44**-40) June 1948 977
–Effect on concrete (**44**-32) April 1948 693
–Effect on concrete (**44**-14) Jan. 1948 345
–Exposure — Test program in long-time study (**44**-21) Feb. 1948 441
Serpentine
–Reactivity (**44**-3) Oct. 1947 93
–Reactivity tests (**44**-8) Nov. 1947 193
Shear — Design for — Code requirements (**44**-1) Sept. 1947 1
Sheetrock—Protection—Winter concreting (**44**-13) Dec. 1947 309
Sherlock, R. H.—Protection of Electric Strain Gages in Concrete (**44**-7) Nov. 1947 189
Shipway
–Construction data — Newport News, Va. (**44**-40) June 1948 977
–Deterioration of concrete in sea water (**44**-40) June 1948 977
Shoulder — Paved — German highways (**44**-39) June 1948 933
Shrinkage
–Control—Plaster (**44**-4) Oct. 1947 129
–Effect of (**44**-32) April 1948 720
–Gypsum content effect on (**44**-6) Oct. 1947 149
–Reinforcement—Code requirements (**44**-1) Sept. 1947 1
–Repair material for hydraulic structures (**44**-24) March 1948 513
–Tests—Concrete prisms (**44**-6) Oct. 1947 149
Silica gel (**44**-3) Oct. 1947 93
Silica release—Aggregate reactivity tests (**44**-8) Nov. 1947 193
Silos—Flour storage (**JPP 44**-186) Sept. 1947 79
Silty-clay — Subgrade — German highways (**44**-39) June 1948 933
Sisalkraft—Protection—Winter concreting (**44**-13) Dec. 1947 309
Slab band system
–Economies of (**44**-15) Jan. 1948 349
–Typical layout (**44**-15) Jan. 1948 349
Slabs
–Casting—Time schedule (**44**-34) May 1948 797
–Design and analysis progress—25 years (**44**-32) April 1948 720
–Design — Code requirements (**44**-1) Sept. 1947 1
–Erection—Dam face repair (**44**-30) April 1948 633
–Finishing (**44**-34) May 1948 797
–Flexural computations — Code requirements (**44**-1) Sept. 1947 1
–Handling and transporting (**44**-34) May 1948 797
–Precast—Used as forms (**44**-30) April 1948 633
–Preparation for plastic flow tests (**44**-10) Nov. 1947 237
–Production — Assembly line technique (**44**-34) May 1948 797
–Reinforcement—Details (**44**-30) April 1948 633
–Shearing stress in — Code requirements (**44**-1) Sept. 1947 1
–Steam curing (**44**-34) May 1948 797
–Thin—Plastic flow of (**44**-10) Nov. 1947 237
Slag aggregate — German highway use (**44**-39) June 1948 933
Slag cements — German production and use (**44**-39) June 1948 933
Slip — Bent-bar anchorages and straight embedments (**44**-12) Dec. 1947 289
Slope-deflection equations — Bent and truss analysis (**44**-9) Nov 1947 225
Slump — Effect on plastic flow of thin slabs (**44**-10) Nov. 1947 237
Smith mixers — Use at Barker Dam (**44**-30) April 1948 633
Soap
–Integral waterproofing (**JPP 44**-185) Sept. 1947 77
–Liquid—Form coating (**44**-34) May 1948 797
Sodium chloride — Storage tanks affected by (**44**-5) Oct. 1947 141
Sodium hydroxide — Aggregate reactivity test (**44**-8) Nov. 1947 193
Sodium sulfate — Effect on durability (**44**-36) May 1948 821
Soil structure—Germany (**44**-39) June 1948 933
Some Doubts About Concrete (**44**-14) Jan. 1948 345
Span length—Effect on plastic flow—Thin slabs (**44**-10) Nov. 1947 237

Specifications
–Cement—History of (44-32) April 1948... 705
–Cinder aggregate (44-16) Jan. 1948..... 361

Spindel, M.—Disc. Durability of Concrete Exposed to Sea Water and Alkali Soils—California Experience (44-36) Part 2, Dec. 1948.....848–1

Spofford, C. M.—Disc. Highlights of the Development of Reinforced Concrete and the Study of Bond (44-20) Part 2, Dec. 1948.....440–1

Sprague, J. C.—Disc. Chemical Test for Reactivity of Concrete Aggregates with Cement Alkalies; Chemical Processes in Cement-Aggregate Reaction (44-8) Part 2, Dec. 1948.....224–1

"Sprazon" — Surface treatment — Pumice concrete (44-34) May 1948..... 797

SR-4 gage
–Applications in structural research (44-43) June 1948..... 1041
–Attached to reinforcing steel (44-7) Nov. 1947..... 189
–Description (44-43) June 1948..... 1041
–Measurement of stress distribution in reinforcing steel (44-33) June 1948..... 1041
–Moisture and pressure protection (44-7) Nov. 1947..... 189
–Procedure for attaching (44-43) June 1948. 1041
–Procedure for attaching (44-7) Nov. 1947.. 189
–Protective coverings (44-43) June 1948.... 1041

Stable temperature — Thin dam (44-2) Sept. 1947..... 65

Stage grouting—Barker Dam repair (44-30) April 1948..... 633

Stain classification — Cinder aggregates (44-16) Jan. 1948..... 361

Staining — Caused by cinder aggregate (44-16) Jan. 1948..... 361

Standards
–ACI — General discussion (44-27) April 1948..... 605
–Difficulties in formulating (44-32) April 1948..... 700

Stanton, Thomas E. — Durability of Concrete Exposed to Sea Water and Alkali Soils—California Experience (44-36) May 1948..... 821

Statically indeterminate structures — Development in 25 years (44-32) April 1948 720

Steam test — Cinder aggregate impurities (44-16) Jan. 1948..... 361

Steam treatment — Cinder aggregate (44-16) Jan. 1948..... 361

Stearates — Integral waterproofing (**JPP** 44-185) Sept. 1947..... 77

Stearic acid—Integral waterproofing (**JPP** 44-185) Dec. 1947..... 329

Steel
–Creep in prestressed concrete (44-23) Feb. 1948..... 485
–Stress—Prestressed concrete (44-23) Feb. 1948 485
–Wire—Creep tests of (44-23) Feb. 1948... 485

Stilbite—Reactivity (44-3) Oct. 1947..... 93

Stirrups
–Code requirements (44-1) Sept. 1947..... 1
–First usage (44-20) Feb. 1948..... 437

Stone, Arthur — Thermal Insulation of Concrete Homes (44-37) May 1948..... 849

Storage of Bulk Flour in Concrete Silos (**JPP** 44-186) Jacob Fruchtbaum Sept. 1947..... 79

Storage — Cement for long-time study (44-26) March 1948..... 553
–Conditions — Effect on plastic flow of thin slabs (44-10) Nov. 1947..... 237
–Sacked cement (**JPP** 44-192) Oct. 1947.... 181
–Sacked cement — Canadian tests (**JPP** 44-192) Feb. 1948..... 501

Strain
–Gages — Attached to reinforcing bars embedded in concrete (44-43) June 1948..... 1041
–Gages — SR-4 — Attached to concrete reinforcing steel (44-7) Nov. 1947..... 189
–Thin slabs — Plastic flow tests (44-10) Nov. 1947..... 237

Strength and Slip Under Load of Bent-Bar Anchorages and Straight Embedments in Haydite Concrete (44-12)
–C. C. Fishburn Dec. 1947..... 289
–Disc. — C. J. Posey and author Part 2, Dec. 1948.....308–1

Strength
–Affected by black coloring agent (44-28) April 1948..... 613
–Chinese concrete (44-17) Jan. 1948..... 381

Strength loss
–Effected by sea water action (44-40) June 1948..... 977
–Flexural — Affected by sand-gravel in mix (44-41) June 1948..... 1009

Stress
–Analysis — Coefficients and charts—Symmetrical bending (44-22) Feb. 1948..... 457
–Analysis — Symmetrical bending (44-22) Feb. 1948..... 457
–Distribution — Measurements in reinforcing steel (44-43) June 1948..... 1041
–Prestressing operation for concrete (44-23) Feb. 1948..... 485
–Variations — Measured vs. computed — Reinforcing steel (44-43) June 1948..... 1041

Stresses
–Concrete allowable — Code requirements (44-1) Sept. 1947..... 1
–Normal — Unsymmetrical bending (44-31) April 1948..... 669
–Steel allowable — Code requirements (44-1) Sept. 1947..... 1

Structural design — Economy in (44-15) Jan. 1948..... 349

Study of Causes and Prevention of Staining and Pop-outs in Cinder Concrete (44-16) S. G. Seaton Jan. 1948..... 361

Stucco—Crack control (44-4) Oct. 1947.... 129

Subgrade treatment — German highways (44-39) June 1948..... 933

Successive trial method — Stress analysis —Unsymmetrical bending (44-31) April 1948..... 669

Sugar-solubility test — Cement in long-time study (44-33) April 1948..... 745

Sulfate
–Attack on concrete (44-36) May 1948..... 821
–Content of cement—Effect on shrinkage and warping (44-6) Oct. 1947..... 149
–Resistance tests — Cement in long-time study (44-33) April 1948..... 745

Sulfate soil exposure — Test program in long-time study (44-21) Feb. 1948..... 441

Sungari hydroelectric project
–Concrete plant (44-17) Jan. 1948..... 381
–Design plan (44-17) Jan. 1948..... 381

Surface preparation—Repairing hydraulic structures (44-24) March 1948..... 513

Surface scaling — Affected by black coloring agents (44-28) April 1948..... 613

Surface texture — Highways in Germany (44-39) June 1948..... 933

Surface treatment
–Floors—Stain (44-34) May 1948..... 797
–Flour storage bins (**JPP** 44-186) Sept. 1947 79
–Tilt-up walls (44-35) May 1948..... 813
–Walls — Attaching wall board (44-34) May 1948..... 797

Surfaces — Exposed aggregate — Germany (**44**-39) June 1948 933

Swayze, Myron A.
–"Hot Cement" Effect on Concrete Mix Temperature (**JPP 44**-189) Dec. 1947 330
–Disc. Concrete Pavements on the German Autobahnen (**44**-39) Part 2, Dec. 1948 976–1

Sweet, H. S.—Evaluation of Aggregate Performance in Pavement Concrete(**44**-42) June 1948 1033

Systems — Reinforcement — Development (**44**-20) Feb. 1948 437

T

Talc—Reactivity (**44**-3) Oct. 1947 93

Tanks — Brine storage — Deterioration (**44**-5) Oct. 1947 141

Taylor, Thomas G.—Effect of Carbon Black and Black Iron Oxide on Air Content and Durability of Concrete (**44**-28) April 1948. 613

Temperature
–Cooling affected by thickness of section (**44**-2) Sept. 1947 65
–Curing — Effect on strength (**44**-13) Dec. 1947 309
–Grouting operations affected by (**44**-30) April 1948 633
–Measurement technique — Thin dam (**44**-2) Sept. 1947 65
–Mix affected by ingredients' temperature (**JPP 44**-189) Dec. 1947 330
–Record—Thin dam (**44**-2) Sept. 1947 65
–Records — Recommended practice for winter concreting (**44**-13) Dec. 1947 309
–"Stable"—Thin dam (**44**-2) Sept. 1947 65
–Thin dam — Spillway effect on (**44**-2) Sept. 1947 65
–Variation — Prepakt addition to Barker Dam (**44**-30) April 1948 633
–Variation—Thin dam (**44**-2) Sept. 1947 ... 65

Temperature reinforcement — Code requirements (**44**-1) Sept. 1947 1

Tensile strength — Mortar tests (**44**-33) April 1948 745

Tension—Diagonal (**44**-32) April 1948 720

Terzaghi, Ruth D.
–Concrete Deterioration in a Shipway (**44**-40) June 1948 977
–Disc. Deterioration of Concrete in Brine Storage Tanks (**44**-5) Part 2, Dec. 1948 ...148–1

Test procedure
–Aggregate reactivity determination (**44**-8) Nov. 1947 193
–Bent-bar anchorages (**44**-12) Dec. 1947 289
–Coloring agent effect on air content (**44**-28) April 1948 613

Test specimen preparation
–Reactivity of aggregate (**44**-41) June 1948. 1009
–Shrinkage tests (**44**-6) Oct. 1947 149

Tetracalcium alumino-ferrite — Occurrence and effect (**44**-38) May 1948 877

Thermal Insulation of Concrete Homes (**44**-37) Arthur Stone May 1948 849

Thin section concrete — Test program in long-time study (**44**-21) Feb. 1948 441

Tilt-up construction
–Adaptibility (**44**-35) May 1948 813
–History of development (**44**-35) May 1948. 813
–Illustrated examples (**44**-35) May 1948 813
–Methods (**44**-35) May 1948 813

Traprock — Blue — Properties (**44**-36) May 1948 821

Tricalcium aluminate
–Effect on cement properties (**44**-32) April 1948 705
–Effect on durability (**44**-36) May 1948 821
–Effect on shrinkage properties (**44**-6) Oct. 1947 149

Tricalcium sulfide — Occurrence and effect in cement clinker (**44**-38) May 1948 877

Triethanolamine as Air-Entraining Agent (**JPP 44**-205) June 1948 1061

Triethanolamine — Air-entraining agent (**JPP 44**-205) June 1948 1061

Truck mixers — Dust problem in loading (**JPP 44**-199) Jan. 1948 418

Truss analysis — Examples (**44**-9) Nov. 1947 225

Trusses — Vierendeel — Analysis (**44**-9) Nov. 1947 225

Tuthill, Lewis H.—Entrained Air Loss in Handling, Placing, Vibrating (**JPP 44**-202) Feb. 1948 504

Tygonite — Waterproofing SR-4 gages (**44**-43) June 1948 1041

Tyler, I. L.—Long-Time Study of Cement Performance in Concrete, Chapter 1—History and Scope (**44**-21) Feb. 1948 441

Tyroler method — Tilt-up construction (**44**-35) May 1948 813

U

Ultimate theory of design — Basis for (**44**-32) April 1948 720

Unrestrained method — Plaster construction (**44**-4) Oct. 1947 129

V

Vapor barriers — Importance of (**44**-37) May 1948 849

Vapor sorption tests — Cement in long-time study (**44**-33) April 1948 745

Vapor transmission — Theory of (**44**-37) May 1948 849

Vermiculite—Reactivity (**44**-3) Oct. 1947 .. 93

Vibration of Air-Entrained Concrete (**JPP 44**-193) H. S. Meissner Oct. 1947 ... 182

Vibration
–Air-entraining concrete (**JPP 44**-193) Oct. 1947 182
–Entrained-air concrete (**JPP 44**-202) Feb. 1948 504
–Pavement concrete — Germany (**44**-39) June 1948 933
–Precast pipe manufacture (**44**-11) Dec. 1947 261
–Repair of hydraulic structures (**44**-24) March 1948 513
–Slab casting (**44**-34) May 1948 797

Vibration frequencies — Paving operations in Germany (**44**-39) June 1948 933

Vibrators
–Dingler tamper (**44**-39) June 1948 933
–Form — Pipe manufacture (**44**-11) Dec. 1947 261
–Vögele (**44**-39) June 1948 933

Vibrometer — Frequency determination (**44**-11) Dec. 1947 261

Vierendeel trusses — Analysis (**44**-9) Nov. 1947 225

Vinsol resin—Addition during cement manufacture (**44**-26) March 1948 553

W

Walker, Stanton — President's Address (**44**-27) April 1948 605

Walker, W. T. — Laboratory Measurements of Stress Distribution in Reinforcing Steel (**44**-43) June 1948 1041

Walls
–Basement—Masonry (**44**-19) Feb. 1948... 421
–Basement—Monolithic (**44**-19) Feb. 1948.. 421
–Basement — Tilt-up construction (**44**-35) May 1948... 813
–Basement — Waterproofing (**44**-19) Feb. 1948... 421
–Beam stiffening action (**JPP 44**-187) Sept. 1947... 80
–Bearing — Design table (**JPP 44**-203) June 1948... 1058
–Casting for tilt-up construction (**44**-35) May 1948... 813
–Construction — Tilt-up method (**44**-35) May 1948... 813
–Design of reinforced—Code requirements (**44**-1) Sept. 1947... 1
–Heat transmission comparisons (**44**-37) May 1948... 849
–Surface temperature determination (**44**-37) May 1948... 849

Warping
–Concrete test prisms (**44**-6) Oct. 1947... 149
–Highways in Germany (**44**-39) June 1948.. 933
–Plastic flow tests — Thin slabs (**44**-10) Nov. 1947... 237

Washa, George W. — Plastic Flow of Thin Reinforced Concrete Slabs (**44**-10) Nov. 1947... 237

Water for Making Concrete (**JPP 44**-197) Jan. 1948... 414

Water
–Acid — Effect on concrete (**44**-40) June 1948... 977
–Penetration—Basements (**44**-19) Feb. 1948 421
–Purity required for mixing concrete (**JPP 44**-197) Jan. 1948... 414
–Tests for impurities (**JPP 44**-197) Jan. 1948 414

Water-cement ratio
–(**44**-32) April 1948... 705
–Importance of (**44**-32) April 1948... 732

Water repellents — Integral waterproofing (**JPP 44**-185) Sept. 1947... 77

Waterproofing
–Basement concrete and masonry (**44**-19) Feb. 1948... 421
–Integral (**JPP 44**-185) Sept. 1947... 77
–Integral (**44**-14) Jan. 1948... 345
–Integral — Stearic acid (**JPP 44**-185) Dec. 1947... 329

Weathering — Accelerated — Cause of failure (**44**-42) June 1948... 1033

Web reinforcement — Code requirements (**44**-1) Sept. 1947... 1

Weight loss—Drying of concrete prisms (**44**-6) Oct. 1947... 149

Welding — Roof slab connections — Prefabricated houses (**44**-34) May 1948... 797

Wet masonry—Chinese use (**44**-17) Jan. 1948... 381

Wetting and drying — Disintegration cause (**44**-36) May 1948... 821

Wheeler, Walter H. — Disc. Economy in Structural Design (**44**-15) Part 2, Dec. 1948.360–1

Whinstone — Reactivity (**JPP 44**-204) June 1948... 1058

Whitney, Byron L., — Disc. Protection of Electric Strain Gages in Concrete (**44**-7) Part 2, Dec. 1948...192–1

Wind stress — Columns — Code requirements (**44**-1) Sept. 1947... 1

Winter concreting
–Objectives of special methods (**44**-13) Dec. 1947... 309
–Recommended practice — ACI Standard (**44**-13) Dec. 1947... 309

Wisconsin — University of — Plastic flow tests of slabs (**44**-10) Nov. 1947... 237

Woodin, D. K. — Precasting Concrete Pipe for the San Diego Aqueduct (**44**-11) Dec. 1947... 261

Woods, K. B. — Evaluation of Aggregate Performance in Pavement Concrete (**44**-42) June 1948... 1033

Workmanship
–Effect on durability (**44**-32) April 1948.... 732
–Effect on durability (**44**-36) May 1948.... 821

Work schedule — Barker Dam repairs (**44**-30) April 1948... 633

Wu Chung-Wei — Disc. Concrete Making in China (**44**-17) Part 2, Dec. 1948.....400–1

Wynn, A. E.—Disc. Concrete Pavements on the German Autobahnen (**44**-39) Part 2, Dec. 1948...976–1

Y

Yangtze River — Aggregate sources (**44**-17) Jan. 1948... 381

Yellow River — Aggregate sources (**44**-17) Jan. 1948... 381

Young, Roderick B.—Progress with Concrete, 1923-1948 (**44**-32) April 1948..... 693

Z

Zinc sulfate — Pre-painting treatment for concrete (**44**-34) May 1948... 797

INDEX

Current Reviews

From JOURNAL OF AMERICAN CONCRETE INSTITUTE, Vol. 19, Sept. 1947 to June 1948

A

A62—Guide for Modular Coordination. Adams and Bradley. Modular Service Association. 512

Acid resistance—Protection of concrete chimneys. *Concrete and Constructional Engineering*..... 338

Activation of mortar for concrete. Nycander. *Betong*.....1067

Advanced Mechanics of Materials. Murphy. McGraw-Hill Book Co..... 89

Aggregate—Grading effect on workability. *Road Note, No. 4*..... 926

Aggregate—Grading effect on workability. Glanville, Collins and Mathews. *Road Research Technical Paper*..... 511

Aggregate reactivity—Chemical method of testing for. Mielenz and McConnell. *Rock Products*..... 507

Aggregate storage—Shaded from desert sun. *Engineering News-Record*..... 338

Airport runway evaluation in Canada. McLeod. *Highway Research Board Research Report*.... 507

Allowable Loads on Eccentrically Loaded Concrete Columns. Morris..... 339

Alumina—Content in cement—Hot climate usage. Hagaar. *Concrete and Constructional Engineering*..... 337

Analysis and model tests of series of solid-spandrel arches. Meyerhof. *Concrete and Constructional Engineering*..... 186

Analysis and model tests of solid spandrel arches. Meyerhof. *Concrete and Constructional Engineering*..... 86

Analysis of freshly mixed concrete. Kirkham. *Chemistry and Industry*..... 506

ANALYSIS

—Arches—Solid spandrel. Meyerhof. *Concrete and Constructional Engineering*..... 86
—Arches—Solid spandrel. Meyerhof. *Concrete and Constructional Engineering*..... 186
—Arches—Temperature effects. Morgan. *Concrete and Constructional Engineering*... 925
—Parabolic arches. Morgan. *Concrete and Constructional Engineering*..... 506
—Statically indeterminate structures. Eriksen. *Concrete and Constructional Engineering*.....1065
—Text book—Structural. Cissel. *Stress Analysis and Design of Elementary Structures*.....1069

Architectural Construction — The Choice of Structural Design. Crane. John Wiley and Sons..... 930

Arches — Analysis — Stiffness and carry-over factors. Morgan. *Concrete and Constructional Engineering*..... 925

Arches—Parabolic—Analysis. Morgan. *Concrete and Constructional Engineering*..... 506

Arches—Solid spandrel—Analysis. Meyerhof. *Concrete and Constructional Engineering*..... 86

Arches—Solid spandrel—One hinged, one fixed end. Meyerhof. *Concrete and Constructional Engineering*..... 186

B

Batching errors—Effect on uniformity. Collins. *Road Note*..... 925

BEAMS

—Cracked—Stress distribution. Bjuggren. *Betong*..... 341
—Design nomograms. Savona. *Concrete and Constructional Engineering*.....1066
—Design nomographs. del Gallego *Manual del Proyectista*.....1069
—Prestressed. Harris. *Concrete and Constructional Engineering*..... 927
—Rectangular—Design charts. Dews. *Concrete and Constructional Engineering*..... 85
— Restrained — Slope-deflection analysis. Eriksen. *Concrete and Constructional Engineering*..... 337
—T-section—Design charts. Dews. *Concrete and Constructional Engineering*..... 85

BRIDGE

— Deck — Vacuum concrete—Precast. *The Car*..... 505
— Design — Railway — Precast prestressed. *Concrete and Constructional Engineering*.. 506
— Design — Suspended span. *Concrete and Constructional Engineering*..... 188
—Floor — Slab design. *Concrete and Constructional Engineering*..... 188
— Girder — Analysis by slope-deflection method. Eriksen. *Concrete and Constructional Engineering*..... 337
—Prestressed members. Harris. *Concrete and Constructional Engineering*..... 927
—Precast prestressed railway. *Concrete and Constructional Engineering*..... 506
—Skew I-beam—Tests of. Newmark, Siess and Peckham. *Bulletin University of Illinois Engineering Experiment Station*...1068

Buffer stops—Railway usage. *Concrete and Constructional Engineering*..... 186

C

Cement specifications—Eire. Building Research Committee of Eire. *Cement and Lime Manufacture*..... 337

Cement — Alumina content effect in hot climates. Hagaar. *Concrete and Constructional Engineering*..... 337

Cement—Chemistry. Bogue. *The Chemistry of Portland Cement*..... 510

Chemical reactivity test—Aggregates. Mielenz and McConnell. *Rock Products*..... 507

Chemistry of Portland Cement, The Bogue. Reinhold Publishing Corp..... 510

Chimneys — Reinforced concrete — Design. *Concrete and Constructional Engineering*..... 338

Church architecture—Concrete types. *Concrete and Constructional Engineering*..... 925
Churches constructed in reinforced concrete. *Concrete and Constructional Engineering*..... 925
Civil engineering—Physics applied to. Rocha. *Gazeta de Fisica*..... 88
Clinker formation—Chemistry of. Bogue. *The Chemistry of Portland Cement*..... 510
Colorimetric methods for rapid analyses of silicate materials. Hedin. *Proceedings Swedish Cement and Concrete Research Institute*..... 340
Colorimetric analysis—Comparison with gravimetric. Hedin. *Proceedings Swedish Cement and Concrete Research Institute*..... 340
Column design—Loads allowable—Eccentric. Morris. *Allowable Loads on Eccentrically Loaded Columns*..... 339
Column design—Nomographs. del Gallego. *Manual del Proyectista*.....1069
Column design—Tabulated allowable loads. Morris. *Allowable Loads on Eccentrically Loaded Concrete Columns*..... 339
Columns—Eccentric loading effect. Richart, Draffin, Olson and Heitman. *Bulletin University of Illinois Engineering Experiment Station*.....1068
Columns—Protective shells. Richart, Draffin, Olson and Heitman. *Bulletin University of Illinois Engineering Experiment Station*...1068
Columns—Slenderness ratio. Richart, Draffin, Olson and Heitman. *Bulletin University of Illinois Engineering Experiment Station*...1068
Compression testing—Soils—Triaxial. Kansas State Highway Commission. *Highway Research Board Bulletin*..... 339
Concrete—a test for consistency. *Reinforced Concrete Review*..... 87
Concrete-filled steel piles support wharf at Long Beach, California. Shoemaker. *Engineering News-Record*..... 338
Concrete buffer-stops. *Concrete and Constructional Engineering*..... 186
Concrete testing. Plum. *Ingenioren*..... 88
Consisency—Iribarren test for. *Reinforced Concrete Review*..... 87
Construction Estimates and Costs. Pulver. McGraw Hill Book Co..... 339
Construction of west coast building proves economical use of pumped concrete. Perliter. *Civil Engineering*..... 187
Cost—Estimating for construction. Pulver. *Construction Estimates and Costs*..... 339
(Cracked reinforced concrete beam) Bjuggren. *Betong*..... 341
Cracking—Stress distribution change caused by. Bjuggren. *Betong*..... 341
Culverts constructed with pneumatic cores. *Concrete and Constructional Engineering*..... 508
Culverts—Pneumatic forms for casting. *Concrete and Constructional Engineering*..... 508

D

Dams—Gravity design. *Concrete and Constructional Engineering*.....1066
Data sources—Classified. *Southeastern Research Institute*.....1068
Deformation—Plastic—Theory of. Hermite. *Institut Technique du Batiment et des Travaux Publics Circulaire*..... 87
Demolition of an anti-aircraft tower in Berlin. *Concrete and Constructional Engineering*.....1067
Demolition—Mass concrete. *Concrete and Constructional Engineering*.....1067
Design of concrete mixes. *Road Note*..... 926
Design of flexible pavements using the triaxial compression test. Kansas State Highway Commission. *Highway Research Board Bulletin*..... 339
Design of raft foundations. Spicer. *Concrete and Constructional Engineering*.....1065
Design of rectangular and flanged beams, The. Dews. *Concrete and Constructional Engineering*..... 85
Design of rectangular containers. Hodgkinson. *Concrete and Constructional Engineering*..... 85

DESIGN

—Arch analysis. Morgan. *Concrete and Constructional Engineering*..... 925
—Arches—Solid spandrel. Meyerhof. *Concrete and Constructional Engineering*..... 86
—Arches—Solid spandrel. Meyerhof. *Concrete and Constructional Engineering*..... 186
—Beam charts. Dews. *Concrete and Constructional Engineering*..... 85
—Limit theory of. VanDenBroek. *Theory of Limit Design*..... 929
—Principles—Structural—Text Book. Cissel. *Stress Analysis and Design of Elementary Structures*.....1069
—Rectangular tanks. Hodgkinson. *Concrete and Constructional Engineering*..... 85
—Structural—Choice of. Crane. *Architectural Construction—The Choice of Structural Design*..... 930
Tables—Beams and slabs. Savona. *Concrete and Constructional Engineering*.....1066
Tables — Columns eccentrically loaded. Morris. *Allowable Loads on Eccentrically Loaded Concrete Columns*..... 339
Tables—Nomographs for slabs, beams, columns. del Gallego. *Manual del Proyectista*.....1069
Designers' Manual (Manual del Proyectista). Del Gallego.....1069
Directory of Engineering Data Sources. Southeastern Research Institute.....1068

E

Eastward extension of London electric railways. *Concrete and Constructional Engineering*.....1065
Effect of batching errors on the uniformity of concrete. Collins. *Road Note*..... 925
Effect of eccentric loading, protective shells, slenderness ratios, and other variables in reinforced concrete columns. Richart, Draffin, Olson and Heitman. *Bulletin University of Illinois Engineering Experiment Station*.....1068
Effect of order of mixing on concrete strength. Serkin. *Commonwealth Engineer*..... 927
Elevator construction—Slip form method. *Engineering News-Record*..... 338
Engine sheds for the L.M.S. Railway. *Concrete and Constructional Engineering*.....1067
Exact method of analysing symmetrical parabolic arches—I. Morgan. *Concrete and Constructional Engineering*..... 506
Exact method of analysing symmetrical parabolic arches—II. Morgan. *Concrete and Constructional Engineering*..... 925
Experiences in Illinois with joints in concrete pavements. Crandell, Glover, Huntington, Lindsay, Richart and Wiley. *Bulletin University of Illinois Engineering Experiment Station*.....1071
Extensibility and modulus of rupture of concrete. Evans. *Structural Engineer*..... 509
Extensibility—Tests of concrete. Evans. *Structural Engineer*..... 509

F

Factory construction—Precast units. *Concrete and Constructional Engineering*..... 505

Fatigue—Tests of concrete subject to repeated stress. LaCamus. *Compte Rendu Des Recherches Effectuees*..... 341

Fatigue limit—Concrete. LaCamus. *Compte Rendu Des Recherches Effectuees*..... 341

Fatigue limit—Steel. LaCamus. *Compte Rendu Des Recherches Effectuees*..... 341

Field Practice. Seelye. John Wiley and Sons. 926

Fireproofing—Precast—Used on steel columns. *Engineering News-Record*..... 338

Fixed points applied to statically indeterminate structures—I. Eriksen. *Concrete and Constructional Engineering*.....1065

Fixed points applied to statically indeterminate structures—II. Eriksen. *Concrete and Constructional Engineering*.....1065

Fixed points applied to statically-indeterminate structures—III. Eriksen. *Concrete and Constructional Engineering*.....1065

Floor system—Selection of. Crane. *Architectural Construction—The Choice of Structural Design*..... 930

Floors—English housing project. *Concrete and Constructional Engineering*..... 85

Form lining—Wood wool. *Concrete and Constructional Engineering*..... 85

Forms—Pneumatic for small culverts. *Concrete and Constructional Engineering*..... 508

Forms—Slip—Elevator construction. *Engineering News-Record*..... 338

Foundation—Choosing the type of. Crane. *Architectural Construction—The Choice of Structural Design*..... 930

Foundation—Raft type. *Concrete and Constructional Engineering*..... 185

Foundations—Raft type—Design. Spicer. *Concrete and Constructional Engineering*.....1065

Framing material—Selection of. Crane. *Architectural Construction—The Choice of Structural Design*..... 930

Fresh concrete—Testing. Kirkham. *Chemistry and Industry*..... 506

G

Gasoline storage—Underwater concrete tank. Johanneson. *Statens Provningsanstalt, Bulletin*..... 86

Genissiat Dam. *Concrete and Constructional Engineering*.....1066

Girders—Designed for viaduct. *Concrete and Constructional Engineering*.....1066

Girders—Prestressed. Harris. *Concrete and Constructional Engineering*..... 927

Grading of aggregates and workability of concrete. Glanville, Collins and Mathews. *Road Research Technical Paper*..... 511

Grain storage—Elevator construction with slip forms. *Engineering News-Record*..... 338

H

H-piles—Bearing of concrete caps on. *Research Report Ohio Department of Highways*.....1070

High-alumina cement in hot climates. Hagaar. *Concrete and Constructional Engineering*..... 337

Highways—White concrete lane markers. *Construction Methods*..... 505

Housing — Four-story residential concrete. *Concrete and Constructional Engineering*..... 85

Housing—Precast construction systems. *Concrete and Constructional Engineering*..... 505

I

Ice on steep grades? Warm pavement with radiant panel heating. *Pacific Builder and Engineer*..... 508

Ice removal—Highway grade. *Pacific Builder and Engineer*..... 508

Improved concreting techniques facilitate grain elevator construction. *Engineering News-Record*..... 338

Improvements in the method of manufacture of precast prestressed concrete structures. Mautner. *Building Science Abstracts*..... 188

Inspection—Data for civil engineers. Seelye. *Field Practice*..... 926

Investigation of the strength of the connection between a concrete cap and the embedded end of a steel H-pile. *Research Report Ohio Department of Highways*.....1070

Iribarren apparatus — Consistency testing. *Reinforced Concrete Review*..... 87

J

Joints — Contraction — Studies. Crandell, Glover, Huntington, Lindsay, Richart and Wiley. *Bulletin University of Illinois Engineering Experiment Station*.....1071

Joints—Expansion studies. Crandell, Glover, Huntington, Lindsay, Richart and Wiley. *Bulletin University of Illinois Engineering Experiment Station*.....1071

Joints—Load transfer at. Crandell, Glover, Huntington, Lindsay, Richart and Wiley. *Bulletin University of Illinois Engineering Experiment Station*.....1071

L

Lane markers—White ribbed—Highway. *Construction Methods*..... 505

Limestone Concrete. Green. Chapman and Hall, Ltd..... 507

Limestone—Aggregate performance record. Green. *Limestone Concrete*..... 507

Limit design—Theory of. VanDenBroek. *Theory of Limit Design*..... 929

Low cost cabinet for testing membrane curing compounds. Beese and Carson. *Oklahoma State Highway Department Materials and Research Laboratory Report*.....1072

M

Masonry—Modular coordination guide. Adams and Bradley. *A62—Guide for Modular Coordination*..... 512

Masonry walls. Crane. *Architectural Construction—The Choice of Structural Design*... 930

Masonry walls—Paint for. Sentel. *Building Materials and Structures Report*..... 925

Mass concrete—Demolition. *Concrete and Constructional Engineering*.....1067

Materials—Mechanics text book. Murphy. *Advanced Mechanics of Materials*..... 89

Materials—Methods of selection. Wood and Price. *Engineering News-Record*..... 340

Mechanics of materials—Text book. Murphy. *Advanced Mechanics of Materials*..... 89

Membrane curing compounds—Testing cabinet. Beese and Carson. *Oklahoma State Highway Department Materials and Research Laboratory Report*.....1072

Million-gallon concrete reservoir in Uganda. *Concrete and Constructional Engineering*..... 185

Mix design — Effect of errors in batching. Collins. *Road Note*..... 925

Mix design—Method used in Britain. *Road Note*..... 926

Mix design—Order affects strength. Serkin. *Commonwealth Engineer*..... 927

Mix design—Pumped concrete. Perliter. *Civil Engineering*..... 187

Mix design—Railroad ties. *Concrete and Constructional Engineering*..... 86

Mixers — Proposed standard requirements. Nycander. *Statens Provningsanstalt Bulletin*. 89

Mixers—Types tested in Sweden. Nycander. *Statens Provningsanstalt Bulletin*..... 89

Mixing—Order affects strength. *Engineering News-Record*..... 337

Mixing order—Effect on strength. Serkin. *Commonwealth Engineer*..... 927

Mixing time—Effect on test results. Nycander. *Statens Provningsanstalt Bulletin*..... 89

Mobility tester for concrete. Nycander. *Statens Provningsanstalt Bulletin*..... 343

Modular coordination—Guide. Adams and Bradley. *A62—Guide for Modular Coordination*..... 512

Moments and shears in continuous concrete frames. Hamilton and Collicott. *Journal, Engineers Australia*..... 188

Moment computations—Continuous frames. Hamilton and Collicott. *Journal, Engineers Australia*..... 188

Mortar—Activation for concrete. Nycander. *Betong*.....1067

Mo-tester—Workability determination device. Nycander. *Statens Provningsanstalt Bulletin*. 343

N

New method of prestressing concrete pipes. *Concrete and Constructional Engineering*..... 186

New standard specification for portland cement in Eire. Building Research Committee of Eire. *Cement and Lime Manufacture*..... 337

Nomograms for the design of reinforced concrete beams and slabs. Savona. *Concrete and Constructional Engineering*.....1066

O

Oil storage in submarine concrete containers. Johanneson. *Statens Provningsanstalt Bulletin*..... 86

Open dump body transportation — Ready-mixed concrete. *Engineering News-Record*.. 338

Order of mixing affects concrete strength. *Engineering News-Record*..... 337

P

Paints for exterior masonry walls. Sentel. *Building Materials and Structures Report*.... 925

Patching—Removal of old concrete before. *Military Engineer*..... 928

Pavement—Joint tests—Illinois. Crandell, Glover, Huntington, Lindsay, Richart and Wiley. *Bulletin University of Illinois Engineering Experiment Station*.....1071

Pavement design—Flexible. Kansas State Highway Commission. *Highway Research Board Bulletin*..... 339

Pavement heating—Ice removal. *Pacific Builder and Engineer*..... 508

Permeability — Gasoline through concrete. Johanneson. *Statens Provningsanstalt Bulletin*..... 86

Petrography—Function in selection of construction materials. Wood and Price. *Engineering News-Record*..... 340

Physical mechanics of concrete. Hermite. *Institut Technique du Batiment et des Travaux Publics Circulaire*..... 87

Physics applied to civil engineering. Rocha. *Gazeta de Fisica*..... 88

Pile caps—Bearing on. *Research Report Ohio Deaprtment of Highways*.....1070

Piles—Steel filled with concrete. Shoemaker. *Engineering News-Record*..... 338

Pipes—Pneumatic forms for casting. *Concrete and Constructional Engineering*..... 508

Pipes—Prestressing method. *Concrete and Constructional Engineering*..... 186

Precast concrete bridge deck used by Pennsylvania. *The Car*..... 505

Precast concrete houses. *Concrete and Constructional Engineering*..... 505

Precast concrete in the construction of factories. *Concrete and Constructional Engineering*..... 505

Precast concrete water tank. *Concrete and Constructional Engineering*..... 185

Precast fireproofing on used steel reinforces columns for re-use. *Engineering News-Record*..... 338

Prefabricated concrete structures test new design concepts and construction techniques. Amirikian. *Civil Engineering*..... 187

Prefabrication—Concrete storehouses. Amirikian. *Civil Engineering*..... 187

Preparation for concrete patching. *Military Engineer*..... 928

Prestress—Partial in beams. Bjuggren. *Betong*. 341

Prestressed concrete. *Reinforced Concrete Review*..... 928

Prestressed concrete bridges. Harris. *Concrete and Constructional Engineering*..... 927

Prestressed concrete railway bridge near Wigan. *Concrete and Constructional Engineering*..... 506

Prestressed members—Technique of manufacture. Mautner. *Building Science Abstracts*. 188

Prestressed pipe—Method of production. *Concrete and Constructional Engineering*..... 186

Prestressed reinforced concrete sleepers tested as simply-supported beams—Part 1 and 2. *Concrete and Constructional Engineering*..... 86

Prestressed structures — Swiss experience. *Reinforced Concrete Review*..... 928

Pumpcrete—Use in three-story building. Perliter. *Civil Engineering*..... 187

Pumped concrete—Large scale building use. Perliter. *Civil Engineering*..... 187

Q

Quay walls—Reconstructions. *Concrete and Constructional Engineering*.....1066

R

Raft foundation at Millwall. *Concrete and Constructional Engineering*..... 185

Raft foundation—Design. Spicer. *Concrete and Constructional Engineering*.....1065

Raft foundation—Slab design. *Concrete and Constructional Engineering*..... 185

Ready-mixed concrete—Open dump truck transportation. *Engineering News-Record*... 338

Reconstruction of quay walls, LeHavre. *Concrete and Constructional Engineering*.....1066

Reinforced concrete and residential flats at Bethnal Green. *Concrete and Constructional Engineering*..... 85

Reinforced concrete viaduct at Stockholm. *Concrete and Constructional Engineering*.....1066

Repair—Removal of old concrete prior to. *Military Engineer*..... 928

Repair—Settlement of church. Harding and Collingridge. *Concrete and Constructional Engineering*..... 85

Report writing — Technical — Textbook. Nelson. *Writing the Technical Report*..... 339

Research on the action of concrete and reinforced concrete subjected to repeated stresses. LaCamus. *Compte Rendu Des Recherches Effectuees*..... 341

Research activity—Bureau of Reclamation. Blanks. *Engineering News-Record*..... 340

Reservoir—Design and construction. *Concrete and Constructional Engineering*..... 185

Ribbed white concrete markers guide traffic day and night. *Construction Methods*..... 505

Roof system—Selection of. Crane. *Architectural Construction—The Choice of Structural Design*..... 930

Roofs—Smoke damage—Engine sheds. *Concrete and Constructional Engineering*.....1067

Runways—Airport—Canada. McLeod. *Highway Research Board Research Report*..... 507

Rupture, modulus of—Concrete. Evans. *Structural Engineer*..... 509

S

Selection of construction materials. Wood and Price. *Engineering News-Record*..... 340

Shade-shed for cool aggregate. *Engineering News-Record*..... 338

Shade shed—Aggregate storage in desert. *Engineering News-Record*..... 338

Shrinkage—Theory—Discussion of. Hermite. *Institut Technique du Batiment et des Travaux Publics Circulaire*..... 87

Silicates—Analysis by colorimetric method. Hedin. *Proceedings Swedish Cement and Concrete Research Institute*..... 340

Slab design—Bridge floor. *Concrete and Constructional Engineering*..... 188

Slab design—Nomographs. del Gallego. *Manual del Proyectista*.....1069

Slab design—Raft foundation. *Concrete and Constructional Engineering*..... 185

Slabs—Design nomograms. Savona. *Concrete and Constructional Engineering*.....1066

Sleepers—Tested as beams. *Concrete and Constructional Engineering*..... 86

Slope-deflection applied to the design of restrained beams. Eriksen. *Concrete and Constructional Engineering*..... 185

Slope-deflection applied to the design of restrained beams—II. Eriksen. *Concrete and Constructional Engineering*..... 337

Slope-deflection fundamental equations. Eriksen. *Concrete and Constructional Engineering*. 185

Slope-deflection analysis — Bridge girders. Eriksen. *Concrete and Constructional Engineering*..... 337

Slump—Comparison with Vebe and Mo. Nycander. *Statens Provningsanstalt Bulletin*... 343

Smoke—Deleterious action on concrete. *Concrete and Constructional Engineering*.....1067

Statically indeterminate structures—Fixed points. Eriksen. *Concrete and Constructional Engineering*.....1065

Storehouse construction—Prefabricated members. Amirikian. *Civil Engineering*..... 187

Stress Analysis and Design of Elementary Structures. Cissel. John Wiley and Sons..1069

Stress—Repeated—Test of concrete subject to. LaCamus. *Compte Rendu Des Recherches Effectuees*..... 341

Structural design. Crane. *Architectural Construction—The Choice of Structural Design*.. 930

Studies of slab and beam highway bridges: Part II—Tests of simple-span skew I-beam bridges. Newmark, Siess and Peckham. *Bulletin University of Illinois Engineering Experiment Station*.....1068

Subgrade testing program—Airport runways. McLeod. *Highway Research Board Research Report*..... 507

Subway construction—Concrete tube lining. *Concrete and Constructional Engineering*....1065

Surveying—Data for civil engineers. Seelye. *Field Practice*..... 926

T

Tanks—Precast unit construction. *Concrete and Constructional Engineering*..... 185

Tanks—Rectangular—Design. Hodgkinson. *Concrete and Constructional Engineering*.... 85

Tanks—Submerged—Gasoline storage. Johanneson. *Statens Provningsanstalt Bulletin*.... 86

Temperature—Effect on concrete strength. Hagaar. *Concrete and Constructional Engineering*..... 337

Test results—Evaluation of. Plum. *Ingenioren*. 88

Testing chemical reactivity of concrete aggregate. Mielenz and McConnell. *Rock Products*. 507

Testing of concrete mixers. Nycander. *Statens Provningsanstalt Bulletin*..... 89

Testing methods. Plum. *Ingenioren*..... 88

Theory of Limit Design. Van Den Broek. John Wiley and Sons..... 929

Ties—Mix design and reinforcement. *Concrete and Constructional Engineering*..... 86

Ties—Tested as beams. *Concrete and Constructional Engineering*..... 86

Tools for better engineering. Blanks. *Engineering News-Record*..... 340

Triaxial compression test—Subgrade. Kansas State Highway Commission. *Highway Research Board Bulletin*..... 339

Trusses—Limit design. VanDenBroek. *Theory of Limit Design*..... 929

Two reinforced concrete bridges at Boroughbridge. *Concrete and Constructional Engineering*..... 188

Two reinforced concrete chimneys at Kingston upon Thames. *Concrete and Constructional Engineering*..... 338

Two viaducts at Ladybower Reservoir. *Concrete and Constructional Engineering*..... 186

U

Underpinning a church at Ealing. Harding and Collingridge. *Concrete and Constructional Engineering*..... 85

V

Vacuum concrete—Bridge deck. *The Car*.... 505

Vebe—Comparison with slump and Mo. Nycander. *Statens Provningsanstalt Bulletin*... 343

Viaduct construction details. *Concrete and Constructional Engineering*..... 186

Viaduct—Design and construction. *Concrete and Constructional Engineering*.....1066

Voco-wire—Swiss use in prestressed concrete. *Reinforced Concrete Review*..... 928

W

Wall construction—Choice of. Crane. *Architectural Construction—The Choice of Structural Design*..... 930

Wall treatment—Paint tests. Sentel. *Building Materials and Structures Report*..... 925

Walls—Quay—Reconstruction. *Concrete and Constructional Engineering*.....1066

Walls—Rectangular tanks. Hodgkinson. *Concrete and Constructional Engineering*..... 85

Water storage tank—Precast. *Concrete and Constructional Engineering*..... 185

White concrete markers—Highway lanes. *Construction Methods*..... 505

Workability—Affected by activation of mortar. Nycander. *Betong*.....1067

Workability—Methods of testing. Glanville, Collins and Mathews. *Road Research Technical Paper*..... 511

Workability — Testing device. Nycander. *Statens Provningsanstalt Bulletin*..... 343

Writing the Technical Report. Nelson. McGraw Hill Book Co..... 339